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Sifán and Hórsók Vocabularies, with another special exposition in the wide range of Mongolidan affinities and remarks on the lingual and physical characteristics of the family.—*By* B. H. Hodgson, *Esq.*

I now submit to the Society my promised Sifán and Hórsók vocabularies with such geographic illustrations as may tend to render them more easily and fully appreciable. I intended to have retained these vocabularies till I had completed my pending investigation of the grammar of the Gyárúng and Hórpa tongues. But the high interest attaching to the discovery of another surprising instance of the wide-spreading relations of these tongues, made in the course of that investigation, and which discovery is sufficiently verifiable even by the vocabularies, though by no means limited to their evidence, together with the bearings of these vocabularies upon my two last communications to the Society, induces me not to postpone the sending of them. I can follow them up, by and bye, by the proposed grammatical elucidations. In the meanwhile there is abundant matter for the present communication in such a statement as I now propose giving of the present discovery, in some general remarks on the characteristics of the vast group of tongues to which the vocabularies now and priorly submitted belong, and in some descriptions of the physical attributes of the almost unknown races more immediately now in question. Nor do I apprehend that the want of the grammatical details adverted to will materially impair the interest of the present communication, since I have anticipated so much on that

head in the way of practical exposition by samples as to make the special discovery I announce perfectly appreciable without those details, which, moreover speaking generally of this vast group of tongues, I have shown reasons for deeming less important than they are wont to be held both philologically and ethnologically.

This series of vocabularies is entirely my own work in a region equally interesting and untrodden. It consists of seven languages, viz. the Thóchú, the Sokpa, the Gyámi, the Gyárúng, the Hórpa, the Takpa and the Manyak; and so novel is a deal of the matter that it will be necessary to explain at once what these terms mean, and to show where the races of men are to be found speaking these tongues. Hórsók is a compound Tibetan word by which the people of Tibet designate the Nomades who occupy the whole northern part of their country, or that lying beyond the Nyenchhen-thánglá* range of mountains, and between it and the Kwanleun or Kuenlún chain. Hórsók designates the two distinct races of the Hór or Hórpa and the Sók or Sókpa, neither of whom, so far as I have means to learn, is led by the possession of a native name at once familiar and general, to eschew the Tibetan appellations as foreign; though it will soon be seen that they are really so, if our identifications fail not. The Hórpa occupy the *western* half of the region above defined, or northern Tibet; and also a deal of Little Bucharia and of Songaria, where they are denominated Kao-tsé by the Chinese, and Ighúrs (as would seem) by themselves.

The Sokpa occupy the *eastern* half of northern Tibet as above defined, and also, the wide adjacent country usually called Khokhonúr and Tangút by Europeans, but by the Tibetans, Sokyeul or Sókland.

* This important feature of the geography of Tibet is indicated by the Nian-tsin tangla of Ritter's Hoch Asien and by the Tanla of Huc. I have, following native authority, used in a wide sense a name which those writers use in a contracted sense; and reasonably, because the extension, continuity and height of the chain are indubitable. Nevertheless Ritter and Guyon have no warrant for cutting off from Tibet the country beyond it up to the Kuenlún, nor are Katché and Khór, the names they give to the country beyond, admissible or recognised geographic terms, Khór, equal Hór, is purely ethnic, and Katché is a corruption of Kháchhé or Mahomedan, literally, big-mouth.

In southern Tibet, or Tibet south of the Nyenchhen-thánglá chain, there are numerous scattered Hórpas and Sókpas, as there are many scattered Bodpas in northern Tibet; but, in general, that great mountain chain, the worthy rival of the Himálaya and the Kuenlún, may be said to divide the nomadic Hórpas and Sókpas from the non-nomadic Bodpas or Tibetans proper. Though the major part be Buddhists, yet are there some followers of Islam among the Hórpas and Sókpas of Tibet; more beyond the Tibetan limits. They are all styled Kháchhé by the Tibetans, of which word I think the Chinese Kao-tsé is a mere corruption, despite Cunningham's ingenious interpretation of Kao-tsé.

The Islamites are also called Godkar, of which term again Klaproth's Thógar seems to be a metamorphosis.

Between the Hórpa and Sókpa in the central part of northern Tibet, are the Drókpa* vel Brógpa, whose vocables I have as yet failed to obtain; and also, numerous "Kazzâk" or mounted robber bands, styled by the Tibetans Chakpa vel Jagpa, who recruit their formidable association from any of the neighbouring races, but especially from the Bodpa (Tibetans proper), the Hórpa, the Sókpa and the Drókpa. The language of the Chakpa is the ordinary Tibetan, and therefore, and because also of their very mixed lineage, they are of little ethnic importance though always cited by the Tibetans, with fear and trembling, as a separate element of their population. The predatory habits of the Chakpa often carry them beyond their own limits, and they and the erratic Drókpa are often seen in Nári where Gerrard and Cunningham speak of them under the designations of Dzakpa and of Dókpa. I doubt the ethnic independance of both, and believe them to be mixed associations, composed of people of the above specified races, from among which the Hórpa or Turks contribute an element even to the Himálayan population of Kanáwer, as is proved by the infinitives in "mak" of the Taburskad tongue.

From Khokhonúr to Yúnán the conterminous frontier of China and Tibet is successively and continuously occupied (going from north to south) by the Sókpa above spoken of, by the Amdóans who for the most part now speak Tibetan, by the Thóchú, by the Gyá-

* Quite distinct from the Dúkpa vel Brúkpa of Bhútán, The 'vel' indicates the distinction of the written from the spoken words.

rúng, and by the Manyak, whose vocabularies are all subjoined; whilst returning back westward, along the pente septentrionale of the Himálaya we have, after passing through the Kham districts of Chyárúng and Kwombo, the region of the Takpas, or Takyeul, styled* Dakpo by Ritter, who however places it East of Kwombo, whereas it lies west of that district, written Combo by him. The Brahmapútra or Yárú quits Tibet in the district of Kwombo, as he states.

Takpa, the Towang Ráj of the English, is a dependency of Lhása. Its civil administrator is the Chónajúng peun; its ecclesiastic head, the Támba Lama, whence our Towang.

The peoples of Sok-yeul, of Amdo, of Thochú, of Gyárúng, and of Manyak, who are under chiefs of their own, styled Gyábo or King, Sinicé Wang, bear among the Chinese the common designation of Si-fan or Western aliens; and the Tibetans frequently denominate the whole of them Gyárúngbo from the superior importance of the special tribe of Gyárúng, which reckons eighteen chiefs or banners of power sufficient, in days of yore, often to have successfully resisted or assailed the celestial empire, though for some time past quietly submitting to a mere nominal dependancy on China. The word Gyá in the language of Tibet, is equivalent to that of Fan (alienus,† barbaros) in the language of China; and, as rúng means in the former tongue, proper or special, Gyárúng signifies alien par excellence, a name of peculiar usefulness in designating the whole of these Eastern borderers, in order to discriminate them from the affined and approximate, but, yet distinct, Bodpa of Kham. Others affirm that Gyárúng means wild, rude, primitive Gyás, making rúng the same as túng in Myamma; and that the typical Gyás (Gyámi) are the

* I should add that Ritter's Gakpo and Gangpo, and Dakpo are not three separate places, but merely various utterances of the single word Takpa, and no more admissible therefore than his Katché and Khor before explained. This great geographer is rather too prone to give a "local habitation" to the airy nothings of this polyglottic region, as I have formerly had occasion to point out, though no one can more admire than I do his immense learning and the talent that guides and animates it.

† Hence Gyá philing, or Frankish stranger. European foreigner is the name for Europeans in Tibet. Philing=Frank, indicé Feringi; *not* as interpreted by M. Huc.

Chinese, though the latter be usually designated specially black Gyás (Gyá-nak).

The Gyárúngs themselves have no general name for their country or people, a very common case. When I submit the interesting itinerary I possess of a journey from Kathmandú to Pekin, I shall more particularly notice the topography of Sifán. At present it will be sufficient to add that this country, which extends from the Blue Sea to Yúnán, with a very unequal width varying from several days' march to only two or three, forms a rugged mountainous declivity from the lofty plateau of Kham to the low plain of Sechuen, and which is assimilated by those who well know both, to the Indian declivity of the Himálaya, the mountains being for the most part free of snow and the climate much more temperate than that of Tibet. *Within* this mountainous belt or barrier of Sifan, are the Takpa, who are consequently Tibetans: *without* it are the Gyámi who are consequently Chinese, as will be seen by their respective vocabularies —vocabularies, not the less valuable for being dialects merely, (if no more) of languages well known, because the dialectic differences of the Chinese and the Tibetan tongues are little understood,* at the same time that they are very important for enabling us to test the alleged distinctness of the great groups of people nearest allied to these divisions.

For my part I apprehend that the true characteristics of the Chinese and Tibetan languages have been a good deal obscured by book-men,† Native and European; and, though it be somewhat pre-

* Leyden reckoned ten Chinese tongues (As. Research. X. 266). Others hold that there is but one. Again Remusat (Recher. sur les lang. Tartares) insisted that there must be several tongues in Tibet, whereas DeCoros (Jour. No. 4,) considers that there is but one. This comes in part of the want of a standard of ethnic unity, whether lingual or physical, and in part of the mixture of distinct races by regarding them under a large geographic and political unity, thus the Horsok belong undoubtedly to Tibet, but do not belong to the Bodpa race. I have given, I believe, all the languages of Tibet, that is, the languages of all the races now and long settled in Tibet. My Gyámi vocables exhibit a vast difference from the Kong one of Leyden, ut supra. But I do not rely on mine, nor have I means to test it.

† A deal of DeCoros' abundant grammatical apparatus of the Tibetan tongue is positively repudiated by the people of Tibet, whilst the learned and sage Remusat

mature to venture an opinion before I have completed my pending investigation of the Gyárúng and Hórpa tongues, I still must say that I suspect few competent judges will rise from the attentive study of this and my two prior series of vocabularies without feeling a conviction that the Indo-Chinese, the Chinese, the Tibetans, and the Altaians have been too broadly contradistinguished and that they form in fact but one great ethnic family, which moreover includes what is usually called the Tamulian element of Indian population as well as nearly every element of the population of Oceanica.*

My former vocabularies showed how intimately the Indo-Chinese tongues are allied with the Himálayan and Tibetan by identity of roots, of servile particles, and even of entire words as the integral results of the combination of the two former, provided only that the comparison be drawn from a field large enough to exhibit the necessary range of admitted mutation both in the primary and secondary parts of words in use for ages among widely sundered and often also extremely segregated races. How large that range of admitted mutation is, I have illustrated by examples in the note appended to the present series of vocabularies, and I recommend those who would properly appreciate the great apparent deviations from a type of language which is, as I suppose, one and the same, to take good heed of what is there instanced. In the meanwhile without fatiguing the reader with more analyses at present, I proceed to remark

teaches us to question the over-strained and unintelligible assertions about the monosyllabism of the Chinese tongue, as if there were no dissyllables, no adjuncts to the roots! and as if the roots of Sanscrit, Hebrew and Arabic were *not* monosyllables. For some valuable remarks on monosyllabism, see Recherches sur les langues Tartares, I. 351-4, and compare what occurs in the sequel as to the monosyllabic polysyllabism (different aspects of the case) of Gyárúng and Tagala. Thus in Gyárúng the root zo becomes Masazangti by mere cumulation of particles, ma sa, ng, and ti.

* The elder oceanic element or Alforian,=our Tamulian and the analogous dispersed and subdued tribes of Indo-China and China: the younger oceanic element or Malayo-polynesian,=the now dominant tribes of Indo-China, China, Tibet, and Himálaya. I must content myself at present with pointing to the special illustration of the *latter* part of this reunion of the continental and insular races in the sequel, though every proof of the wide common domain of the continentals is also an illustration, inferential yet clear, of both parts of it.

that the analogies and affinities indicated by the last series of vocabularies between the Himálayan and Tibetan tongues on one hand and the Indo-Chinese on the other, are carried on and confirmed by some of the present series, whilst others extend the links to the Altaic group of languages; the Gyárúng, Takpa, and Manyak carrying the chain of connexion onwards from the South-east, and the Thóchú, Hórpa, and Sókpa, transmitting it over the Kwanleun to the North and West; the Gyárúng by its grammatical structure exhibiting also marvellous correspondencies with remoter regions; with Caucasus, as has been separately shown already, and with Oceanica, as will appear in the sequel of this communication. How far precisely the other languages now submitted may participate these express and peculiar features of grammatical affinity I am not yet prepared to say. But the whole of them certainly exhibit a great general resemblance in the broader traits of syntactic,* and yet a greater in those of etymological construction. In a word they are evidently members of that single and vast family of languages the singleness and the vastness of which I conceive to be justly inferrible even from its vocables: 1st, because of the similarity of the roots, 2nd, because of the similarity of the serviles, 3rd, because of the similar principles governing the uses and the mutations of both, and the consequent composition and the character of the integral words which exhibit an essential identity in numberless terms of prime necessity after due allowance for synonymous changes in their roots and for euphonic and differential changes in their serviles within known limits and upon a demonstrably single plan. And I infer that the differences characterising this vast family of languages, however striking at first sight, are subordinate, because when the languages are examined upon a broad enough scale these differences are seen to pass away by insensible gradations. Such as they are, they arise

* I may instance the universal substitution of a continuative participle in lieu of conjunctions and of conjunctive (relative) pronouns, because this feature has been supposed to be specially characteristic of the Altaic group. It is no more so than the vocalic harmony of Turki, or than the inverted style and tonic system of the Indo-Chinese tongues. These appear to me to be blending differences of degree only, not absolute differences of kind, and to have been used to sever unduly the several groups.

from 1st, a greater or lesser use of the prefixed, infixed and postfixed particles, amounting to nearly constant employment of some or all of them in some tongues, and to nearly total* disuse of some or all of them in others. 2nd, from a preference by one tongue of the prefixes, of the infixes by another, and of the suffixes by a third. 3rd, from that transposed position and function of the primary and secondary part of words† (root and particle) which is a law of these languages eminently obscurative of identities in its partial operation. 4th, from the substitution of a reiterated root, for a root and particle in the composition of words when the various meanings of the root might otherwise transcend the differencing power of the particles, or at all events, not satisfy the demand for an unusually broad distinction.‡ 5th, from the disjunct or conjunct (elided vowel) method of

* The disuse or non-use is often only apparent, for the surplus "silent" letters are really prefixes, with a blended instead of a separate utterance. That this is so may he proved to demonstration by identity of *function* (differential) in the two: and yet the hlended or separate utterance makes all the difference hetween monosyllahism and its opposite, besides causing other differences that are apt to conceal the essentlal identity of words. See analysis of Caucasian and Mongolian words in appendix to my last communication.

† Compare overleap and leap over: what holds good chiefly as to our verbs, holds good equally as to the verbs and nouns of these tongues wherein indeed the two classes of words are hut faintly distinguishable, or not at all so. Abundant fresh evidence of the law may be found hy comparing Leyden's Indo-Chinese with my Tibeto-Himálayan vocabularies: compare mim-ma and sa-mi, Burmese, with mi-sa, Newari, Root mi; and ma-nek, Burmese, with Nyi-ma, Tibetan, Root Nyi. Day, sun and morning, when compared speak for themselves.

‡ In Gyárúng the root pyé, bird, is so near to the root pé, father, that they have heen segregated hy the application to one of the usual prefix, to the other of the iterative principle, or root repeated, whence tápé, a father, and pyé pyé, a hird, forsan et pé pé. I might add, as a 5th cause of difference between these tongues, the different degrees in which each employs the tonic or accentual variant, which principle has heen most erroneously supposed to be exclusively Chinese and Indo-Chinese, whereas it prevails far and wide, only more or less developed; most where the servile particles and so-called silent letters are least in use; least, where they are most in use; so that the differential and equivalent function of all three peculiarities, that is, of "empty words," (see Chinese Grammar) of "silent letters" and of tones is placed in a clear light such as Remusat vainly strove to throw npon one of the three, viewing it separately. See Recherches sur les langues Tartares, p. 355-7, Vol. I. DeCoros strangely enough says nothing about tones or servile

using the prefixed serviles, whence results at once all the difference of soft polysyllabism or harsh monosyllabism. The resulting disparities of the vocables are certainly often very marked, as in the Watú and Uí instance of Gyárúng and Circassian, (so singularly confirmed by the Malay and Tagala itú, that) as well as in those given at the end of the present series of vocabularies, so that it is no great wonder that the Mongolidan tongues have been referred to many groups so trenchantly separated as virtually to fall under different families. And, if I incline so strongly to unitise the family, it is only because, as far as my investigations have gone, I have been able to discern nothing absolute and invariable in the distinctions—which though no doubt distinctions proper to the vocables only and not affecting structural diagnostics (in the usual narrow sense, for composition of words *is* structure) are yet unusually and as I conceive decisively important owing to the extremely inartificial character which belongs to the grammar of these tongues with some apparently borrowed exceptions, such as that of the Turkish verbs. Not that the grammatical or the physical evidence of this assumed family identity conflicts with that of the vocables*—much the contrary, as we shall soon see—but that the latter has unusual relative value. And, would we speak plainly, we should say that grammar relates equally to the construction of words and to the construction of sentences, and that the former sort of putting together or syntax is always equally, and often more, important than the latter. Certainly it is more so in the Mongolidan tongues which are as much distinguished by their immensity of nicely discriminated terms,† most of

particles and hence his remarks on the silent letters want point and significance. The language of Nepal proper is remarkable for its numerous tones and its scanty serviles, whether literal or syllabic.

* I may mention here an interesting sample of this identity derived from the substantive verb. It is 'da' in Myamma, a-da in Malay, da in Hórpa, gdah in Tibetan, dan in Uraon, &c. So also it is mena in Sontal and mna in Tibetan; and again, it is dúg in Tibetan, dong in Bodo and Garo and dú in Newari.

† See vocab. voce 'give' and 'take.' A Tartar cannot endure that confusion of the precative, optative and imperative which our imperative mood exhibits. But he remedies the defect not by the multiplication of grammatical forms but by the use of distinct words, or distinct multiplications of the same word, thus Davo solicits

them *necessarily* compounds—and compounds of no unskilful contrivance—as by the scantiness and infantine simplicity of the contrivances by which those terms are held together in sentences. Nay, if we look carefully to what has been so well done in one's own day for the elucidation of our own language, we shall discern that the new lights have been principally etymological, borrowed from, as thrown upon, the construction and composition of words, not of sentences.

Perhaps it will be urged that, after all, the structural analogy I have established between the Gyárúng and Circassian tongues belongs rather to the etymological than to the syntactic department of language. Let it be granted, and I would then ask whether the analogy be therefore less important? And is it not singular and a proof wherein resides the essential genius and character of these tongues, and where therefore we are to seek for their true and closest relations, that my scanty knowledge of the Himálayan and Tibetan group of them should enable me unhesitatingly to analyse the words of the Caucasian group, of which I know nothing and to pronounce, for instance, Didi to be a reduplicate root, and Dini to be a root and servile prefix, with perfect confidence and, as I doubt not, with equal accuracy? *That* will at all events be known by and bye, and should the result be such as I look for, the consequent affinity of the Caucasian and Mongolian tongues will take an unquestionable shape and stand on the unassailable basis of words similarly constructed in all their parts and similarly employed throughout.

I must, however, whilst thus insisting on the pre-eminent importance of Mongolidan vocables, freely admit that those of all my present series are by no means entitled to equal confidence, my access to the individuals who furnished the Sokpa and Gyámi words in particular having been deficient for such analytic dissection as I hold by, and the competence of my informants, moreover, not beyond question. I am likewise much in want of adequate original information respecting the Altaic group, and of the books that might supply it. Nevertheless, I think, I may safely affirm upon the strength of my vocabularies that the Sókpo of the Tibetans are, as has been already assumed in

and Davong commands, et sic de cæteris. Compare the disjunctive we, so common in these tongues.

this paper, no other than the Olet and Kalmak of Remusat and Klaproth,* whilst their confrères the Hórpa are almost as evidently Turkish, the Turkish affinity of the latter being inferred, not only from the vocables but from the complex structure of Hórpa verbs and from the quasi Arian physiognomy of the samples I have seen of the Hórpa race. And thus, quoad Sokpo, is dissipated the dream of twenty years, during all which time I have been in vain endeavouring to get access to the Sokpo, assured from the identity of names (Sok pronounced Sog) that in the much talked of people of Eastern Tibet, I should discover that famous race which gave their appellations to the Sogdiana and Sogdorum regio (on the Indus) of the classics, and whose identity with the Sacæ of Indian and Grecian story, whose genuine Arianism and resplendant renown, I never permitted myself to doubt. Reverting to what I have better assurance of, I shall next note a fact as extraordinary almost as that which formed the subject of my last communication to the Society, to wit, that some of Humboldt's characteristics of the Malayo-polynesian tongues hold good as to the Gyárúng language even more strangely than Rosen's of the Circasian; so that we may have possibly in the unsophisticated tongue of this primitive race of mountaineers, situated centrally between the Chinese, the Indo-Chinese, the Tibetans and the Altaians and protected from absorption, assimilation or conquest by their fastnesses, the main and middle link of that vast chain which unites the insular and continental nations of the East and the most remotely dispersed scions of the immensely diffused family of the Mongolidæ!!† Those who are acquainted with the famous Kavi

* I might now add, having just laid my hands on M. Huc's book, the synonyme of Turgot to those of Kalmak and Olet, but that Turgot, like Dúrhét, designates only a tribe of this race, and a tribe whose tribual denomination as well as its migration to the Volga and back to the Ili, had been already stated by Remusat. M. Huc's amusing work in fact adds nothing to our stores of accurate ethnological knowledge, his mere assertion, for instance, that the Hiongnú were Huns throwing no fresh light upon a long debated point, and the nullity of the absolute identity of names in reference to the Sog teaching us yet more to doubt vaguer identifications of this sort. Let me add that M. Huc's account of the habits, manners and characters of the several peoples is capital, and most evidently accurately as vividly delineated.

† It may reconcile some of my readers to this startling announcement to hear

Sprach (known to me alas! only at second hand) will know what I mean when I solicit their attention to the accompanying Gyárúng vocabulary, as bearing on the face of it evidence that in the Gyárúng tongue almost all the words in their ordinary* state are dissyllables, whilst I can assert positively from my own knowledge of the language that the two syllables may be resolved into a monosyllabic root and its affix, *or* into a repeated monosyllabic root. Now these features (which by the way are very noticeable even in the small samples accessible to me of the Circassian tongue) Humboldt has denoted as special characteristics of the Malayo-polynesian languages; and they are certainly most conspicuous attributes of the Gyárúng tongue. Thus, in the first column of the Gyárúng vocables there are thirty-five words, whereof not less than thirty-one are dissyllables and only four monosyllables, and the dissyllables are all resolvable into a monosyllabic root and its customary prefix (Ta, mutable into Ka), save those (Pyépyé, Nyényé) that are formed by reduplication of the radical.

That Pyé, bird, and Nye, cow, are roots, any one may prove for himself by turning to their Tibetan and Chinese equivalents; and that in the Gyárúng tongue the root is in these instances repeated to constitute the current term or integral word is self-apparent. That, again, in Gyárúng Ta is the common and almost indispensable prefix, and is mutable into Ka, both liable to euphonic changes of vowel, to suit that of the radical, the vocabulary also demonstrates, testably to any extent by its predecessors of the allied tongues. And if it be urged, as in truth it may be, that the above constitution of the vocables belongs in essence to all the continental tongues, as Humboldt's sagacity divined it did to all the insular ones, the more frequent use of the prefix and consequent dissyllabism being all that is excessively Gyárúng, I have still to produce another Gyárúng

that there are historical or traditional grounds for supposing this very region to be the common nest and original seat of the Chinese and Tibetan races. See Klaproth's Tabl. Histor. and Memoires relatifs a l'Asie and Remusat's Recher. sur les Lang. Tart.

* I say ordinary state because when all the apparatus of composition attaches, they become polysyllabic. See the sequel, and mark the consequence as to the monosyllabic test.

trait which it shares with what has been deemed the most primitive Malayopolynesian type; and I shall do so by the following quotation from* Leyden. "Few languages present a greater appearance of originality than the Ta-gala. Though a multitude of its terms agree precisely with those of the languages just enumerated (the Western Polynesian), yet the simple terms are so metamorphosed by a variety of the most simple contrivances that it becomes impossible (difficult B. H. H.) for a person who understands all the original words in a sentence to recognise them individually or to comprehend the meaning of the whole. The artifices which it employs are chiefly the prefixing or postfixing (or infixing B. H. H.) to the simple vocables (roots) of certain particles (serviles) which are again combined with others; and the complete or partial repetition of terms in this reduplication may be again combined with other particles." The above, as well as what follows (p. 211-12) upon Ta-gala verbs, is in general remarkably coincident with Gyárúng,† the differences being such only as, when compared with other allied tongues, to show that

* Researches, B. A. S. Vol. X. p. 209.

† I subjoin some samples as significant as Leyden's illustrations of the Tagala verbs. From the root Ching, to go, we have almost indifferently, Yaching, Kaching, Daching, Taching, Naching, in a present sense, and Yataching, Kataching, Datachíng, Tataching, Nataching, in a past sense, with some speciality of sense as to the na and ta prefix that need here be particularized. Next we have Yatachinti, Katachinti, Datachinti, Tatachinti, Natachinti, meaning 'one who goes or went, or the goer,' if one's self; and, if any other, then the series becomes Yatachisi, Katachisi, &c. The negatives are Matachinti vel Matachisi according to the person, the particle of negation displacing the first of the prefixes indifferently. So from Máng to sleep, Karmáng, Marmáng, Tatarmáng, Matarmángti, Tatarméti, Matarmési, I sleep, I sleep not, I slept, I who slept not, Thou who sleepedst, He who slept not, or the sleepless, (other than one's self). From Zo, eat, Tasazo, feed, Tasazángti, I who feed, Tasazési, he who feeds, Masazángti, I who feed not. Of these I give the analysis of the last as a sample. Ma, negative prefix. Sa, causative infix. Záng, I eat, from the root Zá with suffixed pronoun. Tí mutable to Si, the participial attributive suffix.

These are the simplest verbal forms and the most usual, whence the prevalent dissyllabic character of the verbs as of the nouns, as seen in the vocabulary consisting of a root and one prefix. But the vocabulary, whilst it demonstrates this, indicates also the more complex forms, put rather too prominently forward by Leyden in his Tagala samples.

the characteristics, however pre-eminently, are by no means exclusively, Gyárúng among the continental tongues, any more than they are exclusively Ta-gala among the insular ones. Among the latter, Humboldt considers that the Ta-gala (a specimen by the way of the inseparable prefix) preserves the primitive type of the whole group; and that that type is revealed in the Gyárúng I am inclined to assert, without however forgetting that my investigation is far from com-

Thus, in our Gyárúng vocabulary the words, cry, laugh, be silent, run, or four out of twenty-four verbs, instead of a single prefix, have a double and even a treble supply in the simple imperative form there used; as Da-ka-krú from the root Krú; Ka-na-ré from the root Ré; Na-ka-chúm from the root Chúm; Da-na-ra-gyúk from the root Gyúk. Hence, compounding as before, we have from the last cited simple term, Danarasagyúk, cause to run; Madanarasagyúk, do not cause to run; Danarasagyúngti, I who cause to run; Manarasagyúti or Madanarasagyúti, he who does not cause to run; I believe also that the reiterative form Matarmáng is quite as usual as the substitutive form Marmáng, and Matsazángti, for Matasazángti, as Masazángti, time and tense notwithstanding. Repetition and other changes above illustrated in the prefixes, belong much less to the roots, infixes and suffixes whether in verbs or nouns, and when the root is repeated the prefix is commonly dropt, as has been explained as to substantives. But there are instances in the verbs of root repeated and yet prefix retained, though the vocabulary affords none such as its Kalarlar, round, which is a root repeated yet retaining its prefix; whilst the adjectives of the vocabulary, unlike the substantives also afford several instances of the doubly and trebly reiterated prefix, as Kamgnár, sweet; Ka-magnár from the root of gnár, and Kavándro, cold, Ka-va-na-dro from the root dro. The elided forms, however, and particularly Kamagnár show that leaning towards dissyllabism which has been dwelt on,—perhaps too strongly, though it assuredly be a most marked feature of this tongue, and one too which Leyden's mistake as to his own sample verb shows to be pre-eminently proper to Tagala; for "tolog, to sleep" is *not* the radical form of the word, as he assumes, but a compound of the root and its customary prefix, ta, with the vowel harmonised to that of the root.

The prefixes are the great variants, and besides being so much repeated, they can be transposed and interchanged almost at pleasure owing to their synonymous character, and these variations of the prefixes, with the elisions consequent on much reiteration of them, constitute the greatest part of that enigma which Leyden emphasizes; though it be in the actual use of the speech much less excessive (I still speak of Gyárúng), than his samples would lead any one to suppose.

In the above samples of Gyárúng I have given the verbs alone, without the added pronouns of Leyden's Tagalan instances—such additional complication being rather suited to create wonderment than to promote sound knowledge.

plete, and without insisting so much upon the primitiveness of this type as upon its much more interesting feature of a connecting bond between the so-called monosyllabic aptotic and the so-called polysyllabic* non-aptotic classes—classes which appear to me to have no very deep or solid foundation much as they have been insisted on to the obscuration of the higher branches of philology and ethnology rather than to their illustration (as I venture to think), and but for which obscuration our Leydens and our Joneses, our Bopps and our Humboldts, could never have been found at such extreme apparent diversity of opinion. I may add, with reference to the disputed primitiveness of Ta-gala, owing to its use of the "artifices" above cited that throughout the Himálaya and Tibet it is precisely the rudest or most primitive tongues that are distinguished by useless intricacies, such as the interminable pronouns, and all the perplexity caused by conjugation by means of them with their duals and two plurals. The more advanced tribes whether of the continent or of the islands have, generally speaking, long since cast away all or most of these "artifices."

I have thus, in the present and two former communications shown what a strange conformity in the essential components of their speech still unites the long and widely sundered races inhabiting now the Himálaya, Tibet, Indo-China, Sifan, Altaia, Caucasus and Oceanica; and, as a no less strange conformity of physical conformation, unites (with one alleged exception) these races, it cannot much longer be doubted that they all belong to one ethnic family whose physical attributes it shall next be my business to help the illustration of by describing the heretofore unknown peoples whose languages have been submitted to inspection and examination. Before however I

* Compare the monosyllabic roots and dissyllabic simple vocables of Gyárúng with the sesquipedalians just given? The comparison is pregnant with hints, especially as there are in the cognate tongues, all grades of approximation. Thus Kanaré, laugh, in Gyárúng with its double prefix, is Yere in Limbu with one, and Rer, in Magar without any; and thus Taliáng, air, in Lepcha with its prefix and suffix, is Tali, in Gyárúng with prefix only, and Li or Lé in Burmese without either. Innumerable instances like this make me conclude that the Gyárúng differs only in degree, not in kind notwithstanding that its verb, like that of the Ta-gala, certainly presents an extraordinary and seemingly unique spectacle in some aspects—but not in all; for, in the sentence tizé-kazé papun, he called them to feast, though the root za to eat be repeated and each time with a differently vowel-ed servile attached, yet the combination is not grotesque nor the root smothered.

turn to the physical characteristics I must add that all the languages whose vocables are herewith submitted to the Society, are and always have been devoid of letters and of literature, what writing there is among these races being confined to the Tibet-trained monks whose religious ministry they all accept, and who (the monks) use the Tibetan system of writing applied solely to the Tibetan language and never to that of their flocks, the several races now in question or any of them.

I cannot learn that in Tibet the Sokpo or the Hórpa ever employ any system of writing of their own, though I need not add (assuming their identification to be just) that the Mongols and the Eastern Turks have each their own system quite distinct from the Tibetan. Having always considered the physical evidence* of race quite as important as the lingual, and the one as the true complement of the other, I have not failed to use the opportunity of access to the peoples whose vocables are now transmitted in order to note their physical traits.

The following are the chief results of that investigation:—

	Amdóan. I.	*Hórpa.* II.	*Gyárung.* III.	*Manyak.* IV
Height without shoes,	5.8.½	5.7.½	5.3.0	5.4.0
Length of head, from crown to chin (with calipers),	0 8.½	0.8.½	0 9.0	0.9.½
Girth of head,	1.10.0	1.9.¼	1.10.¾	1.10.¾
Length of head, fore and aft or forehead to occiput,	0 7 ¾	0.7.¾	0.8.0	0.8 0
Width of head, between parietes,	0.6.½	0.6.0	0.6 ⅞	0 6 ⅞
Crown of head to hip,	2 4 ¾	2.4.0	2 3.½	2.3.0
Hip to heel,	3 3.¾	3.3.½	2.11.½	3.1.0
Width between the shoulders,	1.4.0	1.1 0	1.1.½	1.4.0
Girth of chest,	3.1.0	2 9.0	2.11.¼	2.11.¾
Length of arm and hand,	2.6.¾	2.6.0	2.4.¾	2.4.0
Length of arm,	1.0.0	1.0.0	0.11.½	0.11.¼
Ditto of fore-arm.	0.11.0	0.10.0	0.9.½	0.9.¾
Ditto of hand,	0.8.0	0.7.¾	0.7.¾	0.7.¼
Ditto of thigh,	1.8.0	1.7.0	1.6.½	1.7.0
Ditto of leg, to ankle,	1.4.½	1.5.0	1.3 0	1.5.0
Ditto of foot,	0.11.0	0.10.0	0.9.½	0 9.¼
Width of hand,	0.4.¾	0.4.⅝	0.4.0	0.4.0
Ditto of foot,	0.4.¾	0.4.¼	0.4.⅛	0.4 0
Girth of thigh,	1.9.0	1.4.¾	1.6.¾	1.7.½
Ditto of calf,	1.3.½	1.1.¾	1.2.0	1.1.½
Ditto of fore-arm,	0.11.0	0.9.¾	0.10.0	0.9.½

* Some attempts have recently been made (see last vol. of Brit. Assoc. and Journal of Roy. As. Soc.) to disparage the value of this evidence. But no one well acquainted with the Tartars in various remote locations could for a moment think of so doing. I refer with confidence to Dr. Buchanan's remarks on the subject in the V. vol. Asi. Res.

No. I.—A native of Amdo, aged 35 years, a finely formed and very strong man, capable of carrying three maunds or 250 pounds over these mountains, which he has done several times in order to turn a penny during his sojourn here, though the lax state of his muscles shows that he is usually an idler, and not now in training for such work, nor much used to it.

A Gélúng or monk of the mendicant class, and of course a shaveling, so that his head has been examined with unusual advantage. Five feet eight and a half inches tall, and more than proportionably broad or bulky, with large bones and ample muscle, not however showing any bold development, the surface on the contrary being smooth and even, like the body of an idler. Not fat at all, but well fleshed. Colour of the skin, a very pale clear brown, or isabelline hue, like dry earth, or dirty linen, or unbleached paper; not yellow nor ruddy at all. No trace of red on the cheeks which are moderately full. Colour of eyes, dark brown; of hair, generally, black, but that of moustache, auburn. No hair on chest, nor on legs or arms. Moustache spare. No beard nor whisker. Hair of head, so far as traceable, abundant, strong and straight. Cranium not compressed nor depressed. Not raised pyramidally, yet brachycephalic rather than dolichocephalic, and the occiput truncated or flush with the thick neck, but not flattened. Vertical view of the head, ovoid not oval, widest between the ears, and thence narrowing equally to the forehead and to the occiput. Facial angle good. Profile inconspicuous. Contour of the face (front view) rather ovoid than angular or lozenge-shaped, the cheek-bones having no conspicuous lateral saliency, nor the forehead and chin any noticeable attenuation. Forehead sufficiently high and broad, and not appearing otherwise from any unusual projection of the orbitar periphery or of the zygomæ. Eyes sufficiently large and not noticeably oblique, but remote from each other, and flush with the cheek and the upper lid, drooping and constricted to the inner canthus which is large and tumid. Nose, good, straight; the bridge well raised between the eyes and the terminal part nor spread nor thickened, though the nostrils be shorter and rounder than in Europeans, and the saliency of the whole organ less than in them. Ears large and standing out from the head, but occupying the usual relative position. Mouth good but large, with fine vertical teeth, not

showing the least symptom of prognathism in the jaws. Very full lips, but not gaping nor at all Negro-like in their tumidity. Chin not retiring nor yet roundly salient, but level with the gums, or in the same plane with the teeth, and square and strong, as well as the jaws which afford ample room in front for an uncrowded set of beautiful teeth. Body well proportioned, but somewhat long (as well as massive and square) in the trunk and in the arms, relatively to the legs. Hands and feet well made and large, but rather as to breadth than length. Head well set on the short thick neck, and shoulders high. Chest, splendid, wide and deep, and general form, good. Expression Mongolian, (but not at all markedly so as to features) and calm and placidly good-natured. Ears bored, but not distended; and tattooing or other disfigurement of the skin quite unknown to all these races, as I may say once for all.

No. II. A Hórpa of Tángo, west of Gyárúng towards Amdo. Name Isaba. Age 38 years. A man of good height (5-7½) and figure, but far less powerful than the Amdóan, and somewhat darker in colour. Spare of flesh, but not actually meagre. Colour, a pale brown, without yellow or red, like all the Himálayans and Tibetans, and the eye, of a dark clear brown, as usual with them. No trace of ruddiness on cheek. Hair of the head, moustache and whisker, pure black. Hair of head, long, straight, strong, abundant. Moustache small and feeble. Whisker rather ampler. No beard, nor a trace of hair on the chest, back or limbs. Head longer (fore and aft) than wide, but scarcely dolichocephalic, though not truncated occipitally, nor compressed nor depressed nor pyramidised. Vertical view, oval, the wider end being the posteal or occipital, and being wider there than between the ears. Facial angle, good. Contour of the face long and oval, without any trace of the lozenge breadth and angularity. Forehead, narrow and rather low, but not retiring. Cheek bones not salient laterally, nor the frontal sinuses or orbits, prominent. Ears large and loose. Eyes of good size, remote, but not noticeably oblique, though the inner angle be tumid with the usual constriction thereto of the upper lid which somewhat narrows the parting of the lids. Nose straight, not very salient, yet well raised between the eyes, and not dilated towards the tip, and the nares elliptic and long, but the bridge nevertheless broad and obtusely rounded. Mouth good, but large and prominent from the fullness of the

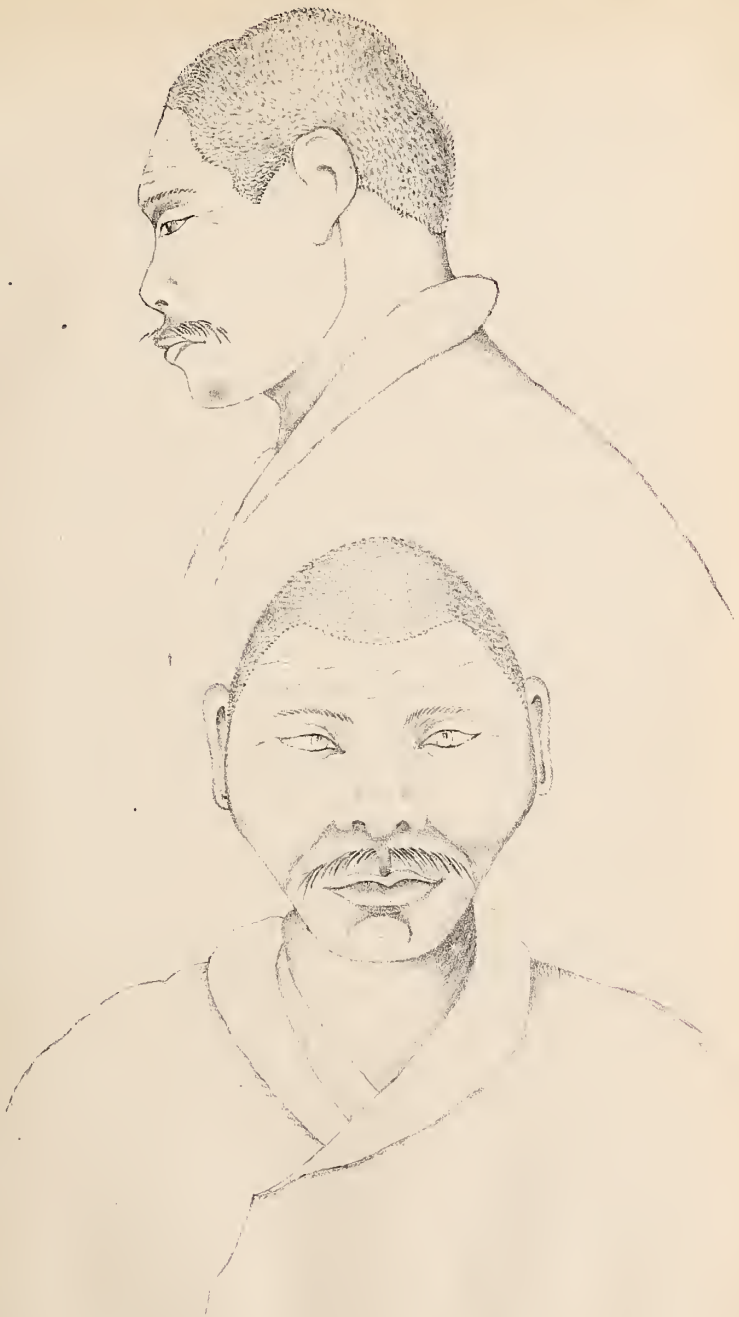
lips which however are not gaping nor are the teeth at all prognathously inclined; well made and vertically set, but not sound. Chin not pointed nor heavy nor retiring, nor jaws unduly large and angular; whence, with the non-saliency of the zygomæ, the face takes a good and Arian contour. Figure good, almost elegant, but the arms rather long, and the legs rather short in comparison of the European form. Hands and feet well made and well proportioned. Hair plaited into a tail, a la Chinoise. Ears bored, but not dilated, and furnished with small earings. Expression pleasing, and cast of features but faintly Mongolian.

No. III.—A Gyárúng of Tazar, north of Tachindo, by name Máching, and by age 33 years. Height 5-3-0, or much shorter than either of the above. A well made smallish man. Bony and muscular development moderate, especially the former. In moderate flesh, but thigh and calf very fine; arms much less so. Arms longish. Legs shortish. Colour of skin a pale earthy brown or isabelline hue without the least mixture of yellew or of red; like Chinese but deeper toned. No ruddiness on the spare cheeks. Eye dark hazel. Colour of hair in all parts, uniformly black; long, straight, abundant, strong, on head; spare on upper lip; none on chin, nor on body nor on limbs. Cranium large, nor compressed, nor depressed, nor pyramidally raised towards the crown, though there be a semblance of that sort from the width of the zygomæ (but this feature belongs to the face). Occiput not truncated posteally. Fronto-occipital axis the longer and vertical view oval with the wide end backwards, the occiput being conspicuously wider than the frontal region or than the parietal, and the maximum occipital breadth lessening regularly forwards to the forehead. Facial angle good with a vertical, but inconspicuous profile. Contour of the face (front view) lozenge-shaped, widest between the cheek-bones which project much laterally, and are flattened to the front causing great breadth of face just below the eyes, whence there is a regular narrowing upwards and downwards. Forehead sufficiently high and not retiring, but narrowed apparently upwards, owing to the salient zygomæ and molars. Frontal sinus not salient. Eye smallish and not well opened nor hollowed out from the cheek and upper lid drooping and drawn to the inner, inclined and tumid canthus. Eyes wide apart and oblique. Nose long, straight, thick, with a broad base between the eyes where,

however, the bridge is not flat but raised into a wide, low arch: Width great there and spreading into an expanded fleshy termination with broad alæ and large round nostrils. Mouth large and salient, yet good. Lips moderate and closed, and teeth vertically set, and very fine in shape and colour. Chin pretty good, not retiring, nor yet projecting, flush with the teeth and somewhat squared as also the large jaws. Ears large and loose. Figure good with head well set on; neck sufficiently long; chest deep and wide, and well made hands and feet. Hair worn plaited into a pig tail. Ears bored, but declaredly contrary to the custom of his country, and not distended. A very Chinese face and figure, and belonging to one who has in his character a deal of the shrewdness tending to knavery that marks the Chinaman.

No. IV.—The Manyaker is 40 years old, and bears the euphonious name of Idrophúncho. He is a native of Rákho, six days south of Tachindo, and by profession a Gélúng or mendicant friar; and a cross made ugly fellow he is, as one could wish to see, with round shoulders and short neck, but stout and good tempered exceedingly; and, moreover, accomplished in reading, writing, drawing and carving like most of the regular troops of Lámaism to which corps he belongs, though to the heterodox branch of it, or Bonpo sect, called by him Beunpo or Peunpo, and which he has enabled me to say is no other than Tántrika Búddhism, or what is commonly called Shamanism.* This very interesting and important discovery I therefore make no apology for inserting here though it be somewhat out of place; and, as I am digressing, I may as well add that to confound the Lámas with the Gélúngs, as Huc and Gabet invariably do, is a worse error than it would be to confound the Bráhmans with the Pandits in India. To return to my friend Idro, whose shaven head has afforded me a second excellent opportunity for closely examining the cranial characters of these races, I proceed to note that he is a man of moderate height (5-4-0), but strongly made with large bones and plenty of muscle, but no fat. Colour, a pale pure whitey brown. No trace of

* In saying that Shamanism is nothing but Tantrika Buddhism I speak most advisedly and fully aware of the opinions I oppose. That the Bonpo also are Buddhists there can be no doubt and my friend Idro's statements and drawings show that his sect follow the Gyút or Tantras which, though canonical, are in bad odour, and have been so since the Gelukpa reform. A Bonpa and a Moslem are alike odious to the orthodox in Tibet, though the Bonpas have many Vihars of high name and date all over the country.



Idro Phuncho, a Sctan Monk, aged 40.

red in the spare cheeks, winter though it be. Eye, dark rich brown, and hair throughout, unmixed and pure black. Like the others, he has none of the Esau characteristic, but on the contrary is, as usual, scant of hair, having not a trace of it on the body or limbs, and not much on the face. No beard. No whisker. A very wretched lean moustache and a spare straight eyebrow. Cranium bachyocephalic and large. Vertical view of the head, ovoid not oval, widest between the ears as in the Amdóan. Thence regularly and equally narrowed to the frontal and occipital extremities. No compression nor depression of the cranium, but on the contrary a distinct pyramidal ascension from a broad base, the point of crinal radiation being somewhat conically raised from the interaureal and widest part of the scull. Occiput truncate and flattened, that is, not projecting beyond the neck nor rounded posteally, like most heads. Facial angle pretty good, but rather deficient in verticality of profile. Contour of the face (see accompanying sketch) lozenge shape, owing to the large laterally salient cheek bones, though the forehead be not very noticeably narrowed (except with reference to its bulging base), nor the chin pointed. Forehead sufficiently good, high but somewhat compressed and retiring, and appearing more so by reason of the heavy frontal sinuses and zygomæ which project beyond the temples towards the sides and front. Ears big and salient. Eyes, remote and oblique, with the inner angle down and tumid and the upper lid drooping and drawn to the inner canthus. Nose rather short, straight, not level with the eyes nor yet much raised to separate them nor elsewhere. Not clubbed at the end, but the alæ spreading, and the nares large and round. Mouth large and forward with very thick lips, but no prognathism, the teeth being vertical and the lips not gaping so as to expose them. Teeth well formed and well set in an obtusely convex large arch, those of the upper jaw however overhanging those of the lower. Chin rather retiring, or flat and square. The partial retirement of the chin and the large frontal sinuses are what mar the verticality of the profile which moreover shows little of nasal and much of oral projection. Figure bad with thick goitrous neck, high forward shoulders, and somewhat bowed legs. Hands and feet well made. Muscular development of arms, poor, of legs, good. A thoroughly Mongolian face, but the ugliness in part redeemed by the good-natured placid, yet somewhat dull, expression.

Vocabularies of Sifán and of

English.	*Tho-chu.*	*Sókpá.*	*Gyámi.*
Air	Mozyú	Sálki	Sphún
Ant	Tú-khrá	Khoró-khwé	Mai-thún
Arrow	Já*h*	Sé li mé	Chen
Bird	Marwó	Thá-kôl	Sphúï-chher
Blood	Sá*h*	Khóro-gwé	Syé
Boat	Phyá	Sákersú	Sí-thú, Thú
Bone	Ripat	Yá so	Kú-thó
Buffaloe	Caret	Caret	Swi-nyú
Cat	Ló-chi	Si-mí	Mau, Myau
Cow	Gwa*h* (Bull zyáh)	Sá-lo	Neu, Nyeu
Crow	Nyágwo	Khéré	Láwa
Day	Styákló	Wúndúr	Péth-yan
Dog	Khwa*h*	Nhókhwé	Kou
Ear	Núkh	Khikhé	Airto
Earth	Zip	Wonnish	Ti, Thou
Egg	Kiwóst	Caret	Chitun
Elephant	Caret	Lháboché	Syáng
Eye	Kan	Nútú	Yen-chin
Father	Ai	I'chiki	Dhá-dá
Fire	Mé*h*	Kwál	Ak-khá
Fish	Izhá*h*	Khélé	Yúé
Flower	Lámpá*h*	Chichúk	Khwá
Foot	Jákó	Khóil	Chya a
Goat	Tsáh	Yá má	Chúlyú
Hair	Hompá, Grong } Kachú of head	} Kéchigé	Thou phwá
Hand	Jipa*h*	Kar	Syú, Syeu
Head	Kapat	Tholá-gwé	Thau
Hog	Pi	Khá-khai	Dhú
Horn	Rak	Yé-bour	Tiko
Horse	Ró*h*	Má-ri	Mà
House	Ki*h*	Pá-syáng	Shhangcha
Iron	Sormo	Thúmár	Thé
Leaf	Thrompi	Náí	Yé-cha
Light	U'ik	Caret	Réyai
Man	Ná*h**	Khún	Rin
Monkey	Wáissi	Méchi	Khouch
Moon	Chhá*h*	Sárá	Yoháng
Mother	Ou	A'khi, Yekhi	Má
Mountain	Spyá*h*	Tává	Sán, Syan
Mouth	dzúkh	A'má	Chwé
Moschito	Beup	Khó-khwé	Wocha
Name	rMá*h*	Nér	Minn
Night	A'shá	Sú	Khélo
Oil	Chingyú	Má-chin-thóso	Eué, Yú
Plantain	Sarmi	Caret	Máchouker

* h, underscored, thus, *h*, marks the abrupt accent.

Northern and South-eastern Tibet.

Gyárúng.	*Hórpa.*	*Tákpa.*	*Manyak.*
Talí	Púryú	Rhót	Mérda*h*
Ko-rok	s Khró	Rhok-pó	Ba-ra*h*
Ki-pi	l Dá	Mlá	Má (Rili, bow)
Pyé-pyé	Gyó	Pyá	Há
Tá-shí	Syé, Sé*h*	Khrá	Shá*h*
Brú (Tabrú, small; Shabru, great)	Grá	Grú	Gú
Syá-rhú	Ré-rá	Róspá	Rúkhú
Caret	Caret	Caret	Dingmi
Ta-rhú	Chúla*h*	Syimbú	Macheu
Nyé-nyé	Gnaume*h*	Bá*h*	Womi (Gnázi, bull)
Ta-brok	Kálé	A'kpo	Kali
Pish-né, nyé	Nyé-lé	Nyénti	Nashchá*h*
Khí	Katá*h*	Khí	Ksha*h*
Tir-né	Nyó	Nebláp	Nápi
Sé*h*	Kcha	Sá*h*	Mali, Mli
Kí-tan	Sgangá	Khálúm	Rácha
Láng-chhen	Lámochhén	Láng-chhén	,,
(Tai-myék; Tam-myek)	Mó	Mélóng	Mni
Ta-pé	A'-pá	A'-pá	Apá
Ti-mí	U'-ma*h*	Mé*h*	Sa-me*h*
Chú-ngyó	Hyá	Gná, Nyá	Yú
Tau-den	Métó	Ménto	Ménto
Tá-mi	Kó	Lémi	Lipchhé*h*
Kús-so	Chhé	Rá	Tsáh
Tár-ni	Spú*	Pú (Krá of head)	Múí (Tsi of head)
Ta-yak	Lhá	Lá	Láp-ché*h*
Tá-ko	Ghó (hard)	Gók-ti	Wúlli
Kí	Váh	Phá	Wáh
Tá-rú	K-rúm-bo	Rú-ba	Rú-bu
Bó-ro*h*	Rhí, Ryí	Té*h*	Bó-ro*h*. Bróh
Chhém	Hyó	Khém	Nyé*h*
Shóm	Chú	Lékh	Shi
Tai-mek	Bálá*h*	Blap	Nipché*h*
Caret	Sphó	Wot	Wú*h*
Tir-mi	vzih	Mi*h*	Chho*h*
Shé-pri, Ti	Zumde*h*	Prá	Miyaháh
Tsi-le, vel Chile*h*	Slikno	Le*h*	Lhe*h*
Tó-mó	Ama	Ama	Amá
Ta-vet	Ri*h*rap	Ri	m Bi
Ti-khe	Ya	Khá	Yebá
Caret	l vasa	Pholi	Bimo
Tir-ming	Smen	Myéng	Ming
Tó-di, Tong-mor	Spha	Senti	Kwaka*h*
Chin-swí, (mustard seed juice)	Marnak	Kyamar	I'chírá, I'tira
,,	,,	Lamrep	,,

* Ghórmé hair of head. Yá-spú hair of mouth or moustache. Pá-spú hair of body.

Vocabularies of Sifán and of

English.	*Thochu.*	*Sókpa.*	*Gyámi.*
River	Chabrá*h*	Wassú, U'sú	Shúí
Road	Gri*h*	Chám	Lú
Salt	Che*h*	Távósó	Yan
Skin	Rápí	Sárú	Phi-cha
Sky	Mahto	Théng-gré	Khen
Snake	Brigi	Thólé	Shré
Star	Ghada	,,	Singh-syú
Stone	Gholopi (hard arabic gh)	Chhilo	Hri-thou
Sun	Mún	Nára	Ré-thou
Tiger	Kho*h* (hard)	Pár	Khú
Tooth	Swé*h*	Syú-chi	Yá
Tree	Gwozósi	Mótó	Hrú
Village	Wékhâ	Hótó	Twáng-cha
Water	Chah	Wassú, U'sú	Shúí
Yam	Jyah	Caret	Yángsú
I	Chi, Ká	Mi, Bi, A'bú	Gnó
Thou	Kwá, Kwé	Chhá	Ni
He, She, It	Kwán-Thá-cha	Thá	Thá
We	Chúklar Chiki, pl. Cheun, dual	Mini	Gnómé
Ye	Kwéniko, Kwa-nik-lar	Chhini *	Nimé
They	Thákо, Thák-lar	Tháni *	Thámé
Mine	Kák chi	Caret	Gnóti
Thine	Kwék chi	Caret	Niti
His, Hers, Its	Thákchi, Kwa-nákchi	Caret	Tháti
Our's	Chikúk	Caret	Gnométi
Your's	Kwánikúk	Caret	Nimeti
Theirs	Thakúk	Caret	Thámeti
One	Ari	Négé	Ikú, I'
Two	Gnari	Hóyúr	Liángkú, Ar
Three	Kshiri	Kórbá	Sángkú, Sán
Four	Gzharé	Tírbá	Sikú, Si
Five	Wárá	Thábá	Wúkú, Wú
Six	Khataré	Chórka	Leukú, Leu
Seven	Staré	Tóló	Chhikú, Chhi
Eight	Khráré	Némá	Pakú, Pa
Nine	r gúré	Yésó	Chyúkú, Chyú
Ten	Hadúré	A'rbá	I'shsa
Twenty	Gninaso	Hóré	Air sa
Thirty	Kshyáso	Kóchhen	Sán sa
Forty	Ghyiso	Téché	Syú sa
Fifty	Wásso	Thácheé	Wú sa
Hundred	Akshi	Chóvó	I'pé

* But for the analogy of the Hórpa plural in 'ni' I should say these were genitives and possessives and that the plurals were wanting.

Northern and South-eastern Tibet.

Gyáring.	*Hórpa.*	*Takpa.*	*Manyak.*
Ti-chī	Hráh	Chhi	Dyáh
Tri	Chéh	Lémdáng	Ráh
Chhé	Chháh	Tsá	Cheh
Ti-dri [meun	Gla	Phyekh (hard)	Grah
Tú-món, Teu-	Koh	Namdúng	Mah
Kha-bri	Phri	Mrúï	Brú
Tsi-ni	Sgré	Karma	Krah
Rú-gú	r Gámé	Górr	Wobi
Ki-ni	Gna	Pláng	Nyi-ma
Kóng	Ták	Té é	Léphé
Ti-swé	Syó	Wáh	Phwih
Shi [khyú	Nah	Shéng dong	Sápoh
Wo-Khyú, Tú-	Rhava	Yú	Hú
Ti-chí	Hráh	Chhi	Dyáh
Sé-ten	Zó	Khé	Zgwáh
Gná, Gná-yó	Gná	Gné, Nyé	A'
Sán-ré	Ni	I'	Nó
Gná-pos, Wa-tú	v Ja, v Jya	Pé, Bé	Thi
Yó	Gnáni, Gnáriggi or rigya	Gna-rá	Plural, A'dúr; Dual, Ajú
Nyó	Nini, Ni-riggi	I'-rá	Nóndúr
Ya pos [fix*	v Jini. v Ji-riggi	Pé-rá	Thídúr
Gná, conjunct pre-	Gná-á (elongation)	Gnékú	Aï
Ní, the same	Nií	I'kú	Nóë
Wá, the same	v Jya a	Pékú	Thié
Caret	Gnáárígya	Gná rá kú	A'durí
Caret	Nïï rigya	I' rákú	Nóndurí
Caret	v Jaa rigya	Pérákú	Thidúri
Ka-tí	Rá	Thi	Tábí
Ka-nés†	Gné	Nai	Nábi
Ka-sám	Sú	Súm	Síbi
Ka-dí	Hla	Pli	Rébi
Kung-gnó	Gwé	Liágné	Gnábi
Kú-tók	Chhó	Kro	Trúbi
Kúsh-nés	Zné	Nis	Skwibi
Or-yét	Rhiéé	Gyet	Zibi
Kúng-gú	Gó	Dügú	Gúbi
Sih	Sgá	p Chi	Chéchibi
Kinnis-si	Naská	Khali	Náchábi
Ka-sam-si	Súská	Caret	Sá chá bi
Kaplis-si	Léská	Caret	Zyizabi
Kúngnósi	Gwéská	Caret	Gná zabi
Par-yé	r Hyá	Caret	Téjé

* A disjunct and complete series of possessives formed by adding the suffix 'young' to the personals has been alleged to me, but it is so rarely used, I doubt its genuineness. Here it is Gnayong vel Gnong. Nayong vel Nong. Gna posyong. Yoyong. Nyoyong. Yaposyong.

† In composition these names of the numerals are liable to variation, as tirmi targé, one man: tirmi tagú, two men: but three men is tirmi kasam, unchanged.

Vocabularies of Sifán and of

English.	*Thóchú.*	*Sókpá.*	*Gyámi.*
Of	K.	Na, Né	Ti
To	Shil	Tú	Khá
From	K, To, Gé	Gásá	Li
By, instru.	I'	Rá	Lá
With, cum	Ong	Théngdi	Kháng chhen
Without, sine	Marúk	U'g gwé	Móma, Meyú má
In, on	Kúkú, Tik, Ti	Thú, Tú	Lá
Now	Patino	O'tó, Wótó	Chhá yé
Then	Stáka, Hatús	Caret	Lá khún
When?	Thisni	Kheeh ché	Ná khún
To-day	Pashi	In dúr	Chin thé
To-morrow	Sózyú	Mágár	Min thè
Yesterday	Narr [si	Nokhor	Hou thé
Here	Cho, Kúzgâ, Chak-	In dé	Thi mé
There	Háto, Thúzga,	Yá bú	Lá mé
Where?	Tano [Thaksi	Thyerthar	Lá li
Above	Tíkh	Téré	Syáng thou
Below	Kól	Tóró	Ti syá
Between	Tigú	Toung dú	Túng jen
Without, outside	Khanyis	Gáchá	Wai thú
Within, inside	Kúkú	Tótar	Lithú
Far	Grikho	Khóló	Ywén
Near	Grin, Grinista	Nangni	Jhin
Little	Khwini	Bágá	Syóti (small)
Much	Brobo	Elvik	Tá-ti (great)
How much?	Nikal	In chhin yúbi	Tó syó
As, rel.	Tek	Caret	Ah men-ti
So, correl.	Stáká	Caret	Lá men-ti
Thus, pos.	Cheu [chan	Yénichhin	Thi men-ti
How?	Nikanjú, Nika-	Caret	Thi má
Why?	Niblin, Nishi	Tharichhin	Syá chú
Yes	Gnówá, Gno	Bi	Syó
No	Mángwá, Mang	Bi si	Púsitiéyó
(Do) not	Chi	Puthi ké	Púsyo
And, also	Tah, Dah	Pichhé	Orcha
Or	Gnóá	,,	Tháng
This	Chá	A'ni. Yéni	Thikou
That	Thá	Théni	Lákou
Which, who, tón	,,	,,	Hi mé
Which, who, ton	,,	,,	Lá mé
Which who, kon?	Sú	,,	Syá, Himé
What? kyá	Ning	,,	Syácha, Hima
Anything	Ningwan	,,	Hiong
Any body	Sóngwan	,,	Ohki, Hiong

Northern and South-eastern Tibet.

Gyárúng.	*Hórpá.*	*Tákpa.*	*Manyak.*
*Caret. Um?	I'. Dang?	Kú	I'
Caret	Gi? Da	Syá, Lá	Wé
Shis. S	Lháno, Gha	I'	Tha, Ni.
Gi	Khá, Wú	Gi	Lé
Kri, Khyás	A'ché	Núm láng	Pháë
Kameï	Máchú	Ma nóna	Májú
S. Pri	Ná, No, Chá	Ná	Khú, Cho*k*
Púz-dúi	Habdeu	Dá	Milé
Tis-dúï	Tabdeu	Téné	Thilé
This-dúi, Kwústra	Sa deu	Kashú	Ninkhé
Pish-nyi	Pas-ni	Tashi	Tanyúr
Sós-nyi	Khasi	Nogor	Sórú*k*
Púsyúr	Maga, A'wesni	Dáng	Yáhá
Chidú	U'dú	Wo cho	Khopú, Dait
Hadú	Outhú	Wo tho	Thúngá pu, Kwa-
Katú	Lóré	Gá, Gáhá	Khadé [nait
U'rkyé	Chhá	Gáng	Chú
Wáki	Wó	Wá	Zyé
U'lé, Tilé	Kyúkú	§Bút ká, Képá	Onglhé
Wónpo	Pheu-so	Phit ka	Nwá
U'gú, Wógú	Náng	Néngá	Khú
Ka sri	Chéchi	Ringbú	Rassá
Kaching	Tháné	Thúngbú	Rini
Kú*k* ché	A'mché	Chútí	Tameh
Kak-ti	Kagaré	Shibo	Tabrá
This-ti	Haisyi	Gó	Trimni
Caret	Naya	Dantang	Mi
Caret	Nyú	Dantarang	Thúzyó
Caret	Wodé	Ustúm	Thúsú, Thúsú, moh
Thígúpso, This-pé	A'chibi	Katin gyá	Hanus moh
Thús-pé	A'chú gnó	Sagyak	Hámilé
Do-mos	Gnór†	In†	Zyi
Di-mek	Nyér	Men	Má Zyi
Met	Má, Di‡	Má,‖ Magyá	Thá‖
Caret	Ré	"	"
Kó, Wóvé.	Ná	Na, Iná	Lé
Chidi	U'dé	Wochú	Thú
Hadi	Outhá, Yé	Wotho	Quathú
Caret	Caret	Caret	"
Caret	Caret	Caret	"
Sú	Sú, Ló	Sú	Sú
Thú	Achin	Si	Háno
Tenzi, Tizzé	A'ke	Sirang	Táká
Sú	Súyó	Sirang	Súyé

* No declensional signs as the general rule; but úm has been obtained as an anomalous exception of very special and narrow use, as Lama-úm-boroh the Lama's horse.

† These are the positive and negative forms of the substantive verb = the Persian hast, nést, exactly.

‡ Di, an infix, medial Ma, prefix.

§ Horizontal and perpendicular betweenity. ‖ Initial and medial.

Vocabularies of Sifán and of

English.	*Thóchú.*	*Sókpa.*	*Gyámi.*
Good	Náï	Chháng béné	Houkhou. Houti
Bad	Ghái. Ghé. Mari	Má béné	Hou ti myú
Cold	Styú	Khou thún	Sidi
Hot	Si	Há lon	Ré-di
Ripe	An. Min	Ból chhén	Phú-ti
Raw	A-min	Chhik thé	Myúphú
Sweet	Jam	Am thé thé	Syángdi
Sour	Chak	Ammahálon	Lá-ti
Bitter	Khák	,,	Khú-ti
Handsome	r kwi	Cháng béné (good)	Houti (good)
Ugly	Márkwi	Má béné (bad)	Houti myú (bad)
Straight	Kasth	,,	Ting-di
Crooked	Jaggra. Jablá gwé	,,	Ting-di myú
Black	Nyik	,,	Khidi
White	Phyokh	Chhágán	Pi-di
Red	Shidzi	U'lán	Khóng-di
Green	Zyángkú	Khó khó	Lig-di
Long	Drithú	U'r thú	Thang-ti
Short	Wóngchithá	,,	Thóng-ti
Tall	Bráthá	U'n dúr	Kou-ti
Short	k Tháthá	,,	Ti-ti
Small	Bratsi tha	Bágá	Syou-ti
Great	Pwí tha	I'khi	Tá-ti
Round	Ashyara	,,	Eang-di. Yángdi
Square	Ghzirú	,,	Pyáng-di
Fat	Charwá	Yokhwé thé	Hou-ti (good)
Thin	Charghé	O'khú ná é	Syou-ti (small)
Weariness	Darvatch	Yá tava	Sphwá leu
Thirst	Tirpitch	U'léso	Kháng ti
Hunger	Ashpitch	Wolúso	O'-ti. Wó-ti
Eat	Adz	E'thé	Thyé, Khyé
Drink	A'thí	Wúó	Khwá
Sleep	A'nan	Wúm tha	Swikyór
Wake	Toron (get up)	Pós	Khilé
Laugh	Daran	Enna	Syó
Weep	Arzan [kochin	Wún na	Shúhrin
Be silent	r Sgástan. Dzúk	A'h má hópchhi	Quápótho
Speak	Kwor, Kúrr	Caret	Caret
Come	Hai	Iré	Lé
Go, depart	Dákan	Yá bú ?†	Chhi
Stand up	Toron	Posth	Chhilé
Sit down	Ajon	Só	Chó
Move. Walk	Dákan	A'hyar yábo	Chú. Chhi.
Run	Dádran	Thúr keng	Théwo
Give	Dagsh (cuivis)* / Kwúgsh (mihi)	Wúg. Euk	Ki. Yoho
Take	Jádjh	Caret	Rákwó

* In all these tongues there is a special and general term, indicated by the Latin appendage.

† Quære? Iré bú, come not, in Kalmak.

Northern and South-eastern Tibet.

Gyárúng.	*Hórpa.*	*Tákpa*	*Manyak.*
Kasné	Gáyé gnor	Lihúni	Deunda*h*
Ma-kasné [mishta	Gáyé nyér	Lihúmani	Mánda
Kavandró. Ka-	Kúrkú	Krang-mo	Phemphé
Kassí. Kavassi	Ché ché	Gromo	Chéché
Ka-sman	Núlúmsi	Choso	Demi
Ma-ka-sman	Númálúmsi	Machoso	Demámi
Kam-gnar	Thú-thú	Nyok-pa	Debi
Kúch-chúr	s Gús-go	Kyúr-pú	Da-chú
Kúc-ché*k*	s Nésné	Khák-bó	Dá-khá
Kúm-chhúr	Kam-syúr	Lihúni. Gnómánó	Phyún phú
Ma-kumchhúr	Mem-syúr	Lihúmáni. Gnómá-	Mám phyu
Ka-kasto	Kathóng	Tráng bó [mano	Chú chú
Ma-kasto	Gúngú	Kyok po	Kho kho
Ka-nak	Nyá nyá	Nak po	Dáná
Kaprom	Phrú phrú	Khérú	Dallú
Kaver ni	Gingi	Leu	Dani
Karmyak	Jhángú	Chángú	Chúgindo
Kasri	Kachi	Ringbo	Sháshá
Kachan	Kalgé	Thongpo	Dridra
Kasri	Gakhyé	Zúgring	Hrá hra
Kachin	Gádé	Zúg thung	Dridrá
Kahchai	Kamma	Chúngbo. Prú	Yíí
Ka*h*tí	Kamthú	Thénbo	Kah kah
Kalarlar	Lóló	Birhi	Wá*h* wa*h*
Zhirdo	Súr zhi	Túp-zhi	Drazo
Kwipan	Kalbo. Galvo	Gyák pa	Dachú*h*
Kwichem	Chú chú	Kámrháng	Kárí
Disdúk	Nerthá	,,	Ná brída
Taskom	Nasyá	,,	Depsyá
Tomos	Namjóngsi	,,	Vitengné
Ta-zó	Nangi	Zó	Gnajeu
Ta-mot	Wathi	Thong	Gnachhó*h*
Korman	Gúrgyún	Nyet	Khaiya*h*
Tar-was	Taryén	Láng (get up)	Dougwá*h*
Ka-náré	Khá khé	Gyé	Narir
Da-ka-krú	Nakabrá	Gnú	Dangwá
Nák-chún	Yá-gúzi	Thámá	Thathadyu
Ta-chén	Nap-shé*h*, Tayin	Syát	Thadyu
Ka-pún. Pa-pún*	Kwi-lhe*n*	Syó	Lemo
Yeyen, Da-chin,	Ta-shin. Wa-shin	Gai	Yú
Tar-yúp [Ya-chin	Zúryén	Láng	Khanjéh
Ná-nen	U'nzún. Wanzún	Zúk	Naijeu
Ye-yen. Ya-chin	Tashin	Gai	Yú
Danar-gyúk	Tamgyo	Pshet	Tachimoyú
Da-vo (cuivis) }	{ Tú-khyé (cuivis) }	} Bé. Bin	Wa-khi. Ta-khi
Da-vong (mihi) }	{ Tú-khóng (mihi) }		
Da-ven	Gwonkhé. Túshthú	Yá.† Lónga	Dangó

* Ka prefix becomes pa, according to that alliterative principle which prevails so greatly though irregularly.

† Bé, Yá, have a special sense. Give to *me:* take from me. Bin, Lóng, a general sense. One solicits; the other, commands.

Vocabularies of Sifán and of

English.	*Thóchú.*	*Sókpá.*	*Gyámi.*
Strike	Da-gatch	Chhok ka	Tá
Kill	Ta-séh	,,	Sá
Bring	Dzi-la	Ahbá-thira	Lá-le
Take away	Doukwa	Ahbá-chhi	Lá-chhé
Lift up	Ta-chi	Wúra	Máyú
Put down	Kwaksh	Caret	Caret
Hear	Kokshustan	Súnú	Thyén
Understand	Akhchan	Háriya	Syá
Tell, relate	Kúrr	Khala	Shró

Note.—The orthography is in general that sanctioned by the society and commonly used by me, but there are a few deviations necessitated by the peculiar articulation of these races whose gallic j and ú are of incessant recurrence; I have represented the former sound by zy and the latter by eu. Both sounds are found in the French word jeu. The system of tones or accents, so important for discriminating the many otherwise-identical roots in these tongues, there is no practicable method of doing justice to. But I have marked the chief one, or abrupt final, by an underscored h, thus *h*. In Thóchú and in Hórpa, the h, kh, and gh, have often, nay generally, a harsh Arabic utterance. I use the short vague English a, and e, as in cat, yet, for their common equivalents in these tongues, but u has always the oo sound, whether short or long. It so occurs in English though rarely, as in put, pudding. The continental (European) and eastern system of the vowels is that pursued, and the long sound of each is noted by accent superscribed. It is the common vocalic system, the English being wholly beside the mark. Y is always a consonant. It blends with many others to give them a sliding sound as in the zy, above instanced. It gives S the sound of Sh, as in the Syán of (Shan) tribe's name. It must never be made a vowel, a l'anglaise, for that makes monosyllables dissyllabic and totally changes the proper sound of words. The same as to W, which we English are however more familiar with. From é, I make the diphthong ai; from á that of au; from ó that of ou, sounded as in aye aye, hawfinch, how; which, with the gallic eu (beurre heurre), are invariably diphthongs, each with a single blended sound. If two vowels come together and require separate utterance, the latter is

Northern and South-eastern Tibet.

Gyárúng.	*Hórpa.*	*Tákpa.*	*Manyak.*
Ta-túp	Nazbi	Dúngá	Dan-thá
Ná-sé	Ta-shé	Sótá	Na-sya
Ko-pet	Wú-khyé	Rotá	Trúlhé
Di-cháng	Wúm-bé	Khor	Túyú
Ta-yok	Rang-ké. Rházi	Longna	Da-chi
Na-tok	Ralé	Nina	Wúchi
Kar-nyou	Wul min	Nyan	Khabé ní
Ti-sen	Sam tenchú	Sém	Najinjé
Ta-chen	Ta-yin. Nap-shé	Syat	Thai-dyú

superscribed with a double dot, as dáï. I have marked off the prefixes (tir-mi, man, see Gyárúng column) to facilitate access to the root and comparison on a large scale such as that lately employed to illustrate ethnic affinities. This and the like marking off of the suffixes will be a great aid to those who wish to make such comparisons without knowledge of these languages. But the procedure is hardly correct since the root and its prefix in particular are apt to be blended in utterance by transfer of the accent (mí, tír-mi) and since the sense also of the roots is occasionally as dependant (though in a different way) on that of their prefixes, as it is in regard to the prepositions of the Arian tongues (tir-mi, man; ti-mi, fire). Nevertheless these important particles are liable to a large range of mutation, synonymous as well as differential, merely euphonic as well as essential, whilst some of the tongues use them very amply, and others very rarely. Add to these features the infixes and the suffixes, with the occasional change of place and function between all these, and you have before you the causes of the differences of these languages which are often so operative as to merge their essential affinity and make it indiscernible except by those who, knowing the roots, can pursue them *and* the servile portions of the vocables through their various metamorphoses and transpositions.*

* Compare in Tibeto-Himálayan and Indo-Chinese series, as follows:
Day.—Nyi-ma, Ma-ni, Nye-n-ti, Nhi-ti-ma, Sak-ni. Root Nyi.
Eye.—A-mik, Mi-do, Mi-kha, Ta-i-myek, Myé-t-si. Root Mig.
Dog.—Khi-cha, Ko-chu, Chóï-ma, Khwé, Ta-kwi, Ka-zeu. Root Khyi.
Ripe.—Kas-sman, Mhai-ti, Mhin, Min-bo. Root sMin.
Sour.—Kúch-chúr, Kyúr-bo, Da-chu. Root sKyúr.
Hear.—Khep-ché, Nap-syé, Ta-ché-n. Root Shé.
These are extreme cases perhaps of mutation; but they are therefore all the better adapted to illustrate my meaning; and links enough will be found in the vocabularies to bind them surely together. B. H. H.

Ibn Huokul's account of KHORASAN,—*translated by Major* W. ANDERSON, *Bengal Artillery.*

KHORASAN

Is the name of a large country divided into districts. On the East it is bounded by Seestan and India, I have already given in my map of Seestan those portions of Ghoor which are near and belong to Seestan, but the entire country is considered Indian. I have included the districts of the Khulnj tribes in Cabul. While Wakan and those places to the south of Khotul are also Indian.

To the West lie the deserts inhabited by the Goz tribes and the country of Joorjan.

To the North extends Mawarolnuhr and a portion of the Tork kingdom south of Khotul.

To the South are situated the desert of Fars and Koomis.

But I have added Koomis to the map of Duelum, Joorjan, Teberestan, Rue, and Kuzween, and of them formed a separate division.

I have included Khotul with Mawarolnuhr, as lying between the Wukhshab and Khurab, and also Kharism, because it is beyond the river and its capital nearer to Bokhara than to Khorasan.

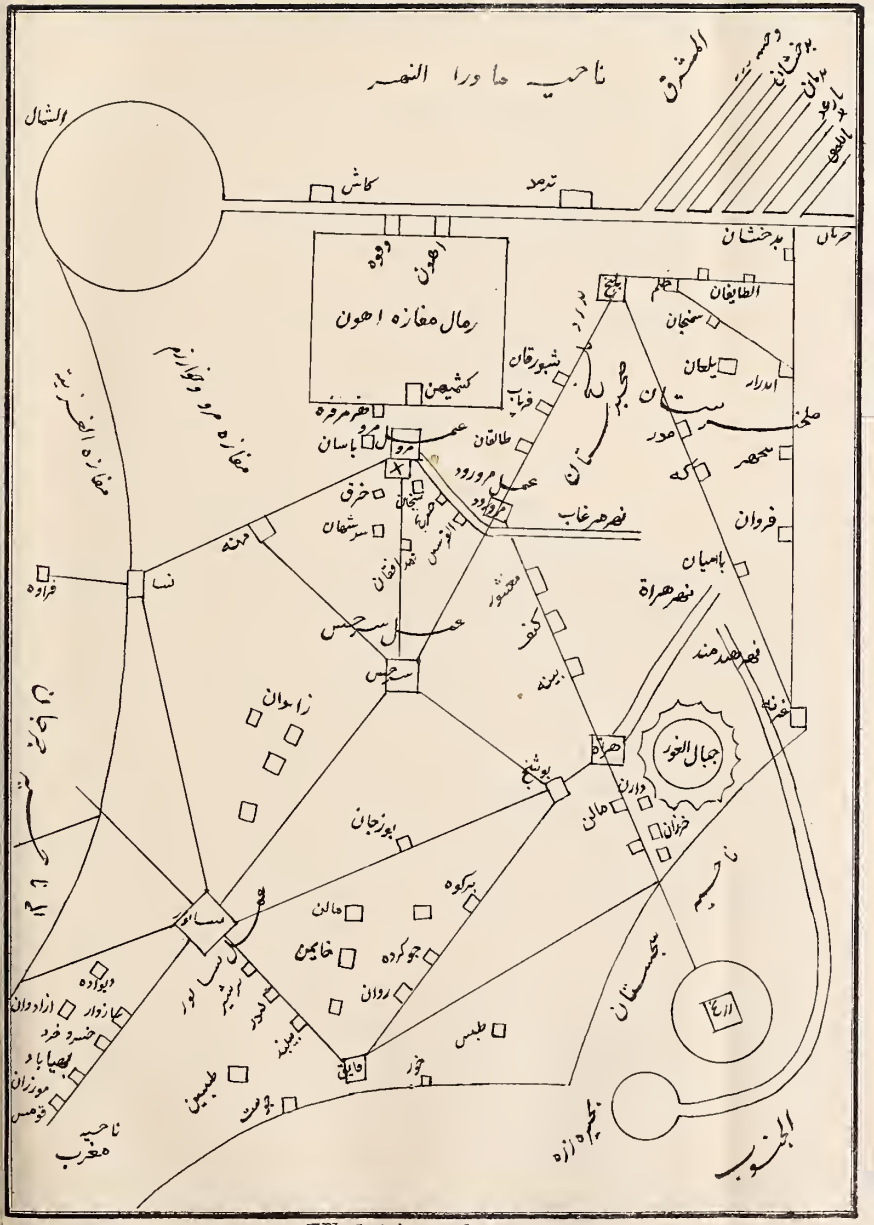
This country to the east is enclosed by a line sweeping along the desert of Fars and Herat and Ghoor, to Ghuznee; joined by a line from Koomis to Furawuh making nearly a square. Thence, along the confines of Joorjan and the Caspian to Kharism, embracing the inhabited places.

In the various aggregations and divisions of Khorasan the chief places are, Neeshapoor, Merv, Herat, Bulk.

The minor subdivisions are, Koohistan, Toos, Nesa, Abeewurd, Surukhs, Esfezar, Pooshung, Badghues, Gunj—Rostak, Mervrood, Joozjan, Bameeyan, Tokharestan, Zum, Amol. Kharism I will describe with Mawarolnuhr, as its capital is beyond the river, and nearer to that country than to Persian Khorasan.

I have not separated Neeshapoor, but have detailed under it all the various subdivisions, at the same time I have separated Tokharestan from Bulkh, as, although commonly joined in name, their description and revenue accounts are kept separate.

19th Map



T. Black, Asiatic Lith. & Press.

These arrangements only involve some care in the table of routes, and in the map, as it is necessary to introduce so many places under the one map of Khorasan.

Neeshapoor was known as Eeran-Shuhr, it is situated in a level country with houses built of unburnt brick, placed at a distance from each other, the city covers a square fursukh, having a town, fort and ramparts—both the town and fort contain a large population. The Jama Musjed is in the suburbs at a place called the Cantonments. The Government house is situated on a plain called the Prison-square, near the Jail, at a distance of a fursukh from the Musjed, it was built by Omur bin Lues.

The fort has two gates, and the town four.

The Rasulkunturuh or bridge gate.

The Mokufful or closed gate.

The Kohundez or fort gate.

The Deze-Mushkan.

The fort is distinct from the town, but the ramparts enclose both; these last have gates, that leading to Urak and Joorjan is the Kobab, that on the Bulkh, Merve and Mawarolnuhr road is the Jubul or mountain gate; the entrance on the Fars and Kohistan road is the Huozol Eyaz gate; while on the Toos and Nesa road are several gates, as the Sookhtuh and Sere Sheereen.

The bazars are outside the town and the fort in the suburbs, the best is known as the Great-square and the second as the Small-square, from the great square the bazars extend to the east as far as the Musjed, and to the west they join the smaller square—to the south they extend to the tomb of the two Husuens, and to the north the streets end at the Bridge. The smaller square is near the prison and Government house.

The water is chiefly taken from kareez running near the habitations and it flows from the houses and waters the gardens inside and outside the city. They have also a large river called the Wade Sughawur. Several towns and villages are irrigated from its waters which run from this Wadee, nor is there any larger river.

In the whole of Khorasan there is no more extensive or salubrious city than Neeshapoor.

The weavers manufacture stuffs of cotton and of silk which are

so plentiful and good as to be exported to all countries of Moslems and of Kafers.

Neeshapoor possesses extensive districts and populous towns, as Boozjan, Malun called Kesrajerd, Khaemund, Suloomul, Sungan, Zoozun, Kunduz, Tersheez, Janruwan, Azad-war, Khushuogerd, Buhmunabad, Muzneyan, Subzwar, Rewaduh, Mehrjan, Esfurayun, Khuer Khan, Zurmuluh, and if Toos be included, there may be added Radgan, Taburoon, Burooghoor and Nookan.

Toos contains the tomb of Ulee the son of Moosa Reza, on whom be peace, also the sepulchre of Haroonul-rusheed; the tomb of the former is distant from the town about four fursukhs, in a village called Sunabad. The latter is at Nookan. Turquoises are extensively found in the hills near Neeshapoor and Toos, and earthen-ware is exported.

Merv, known as Merve Shah Juhan, is a very ancient place, the fort is considered to have been built by Tuhmoorus, while the old city was founded by Zool Kurnuen; it is situated on a level plain far from any hills; the soil is saline and very sandy, while the houses are of unburnt bricks. The place contains three Jama Musjeds—the oldest being the Musjed built inside the place on the first introduction of Eslam called the Muhan next is the Musjed Uteek at the city gate chiefly occupied by the traditionists; the third is the Musjed of Makhan. They consider this last Musjed, the bazars and the Government house to have been built by Abo Moslem. The Government house is in front of this Musjed and contains an arched room built by Abo Moslem under which he used to sit—and to this day the Umeers of Merv assemble under it; it is built of bricks and mortar, and covers a square of fifty-five cubits.

This doomed room has four doors, each opening into a vestibule ornamented over the entrances with sculptured representations of large fish, and in front of each vestibule is a square open court. The fort is as large as the city, but now in ruins, it is built on an elevated mound which has a kareez cut into it from which the water runs to this day; and sometimes vegetables and melons are cultivated on it.

Originally the bazars were at the gate of the city near the Ateek musjed, but in the days of Abo Moslem, they were removed to Makhan, they are cleaner than the bazars of other cities.

The Eedgah is situated in the division called Rasulmuedan near the square of Abee Jehem, and is surrounded on all sides by houses and buildings. The situation is between Makhan and the canal of Hormuz Kurúh. The streets of the city have four canals—among them is the canal above mentioned—on which are built many of the houses of the city, it enters the walls from the direction of a place called Serjosh.

Hosuen bin Taher erected many of these buildings, and wished to remove the bazars and Government house to this position. The inhabitants of the quarter of the city called Ras ol Shabaee use this water, in this division, resides the family of Shuekh ol Juleel Abu fuzl Mohummud, the son of Obuedallah.

Another canal is called the Makhan; on it is the Government house, the bazars, the musjed Hadeesan, the jail and house of the family of Abee Lukhum the slave of Abee Moeet. In which house is a dome, round the interior of which is written the declaration of election to the Khulafut of the family of Abbas, the cupola stands to this day.

Another canal is called the Zoruk—it flows to the gate of the city and its water is used by the people, on it is the Uteek musjed, and lower down is the house of the family of Khaleel ben Uhmud ben Hemad, the Governor of Bokhara.

Next is the canal of Usudee Khorasanee, which waters the Muhuluh of the Sunjar gate, Burmahan and other quarters; on this canal was the house of the Murzban of Merv.

Such are the canals on which are placed the various divisions of Merv with their buildings, a wall surrounds all these four canals with the houses; a second wall surrounds the city and the various villages and is known as the wall of Raee, of it remains are now to be seen.

The interior city has four gates.

The first leading to the Jama-Musjed is called the Sharsan.

The Homa, the Sunjar, the Malun, the Dure Mushkan leading to Bokhara, near which was the residence and the mint of Mamoon during the period he lived at Merv, previous to his being elected to the Khulufut.

Merv has one chief river rising under Bameyan from which are cut

all the above-mentioned canals irrigating the lands, it is called the Morghab or waters of Merv, some think the name is taken from that of the spring where the river rises, named Morghab ; others, that the derivatiou is from Murgh Ajmuh, the pasture of reeds.

This river flows to Merv rood and its villages and then enters Merv Shahjuhan at Goo Geen between Khoozan and Kurshee—the bunds are placed at the village of Zoruk where the water is thrown off into the canals—by boards having holes equalizing the division of the water to all parties, so that if any person takes more or less than his right destruction overtakes his crops. There is an officer placed in charge of the water who is even a greater man than the Walee of Muoonuh.

I have uuderstood that ten thousand men find employment on this river. Merv was the cantonment of a large force in the early days of Eslam ; and the district was the place which determined the possession of Persia, to the followers of Mohummud, for Yezdegerd the last king of Persia was killed in a mill on the canal of Zoruk. From this quarter arose the call to the Khulufut of the Abbas family. In the house of the children of Aboo Lukhum Olmoeet was this celebrated call, written round a dome ; but now hardly to be read. From this city went forth Mamoon to contend for the Khulufut with his brother Mohummud bin Zobueduh. Many bestowers of the Khulufut resided in this city.

The best penmen of Erak and Khorasan, the most celebrated theological lawyers and masters of ethics are of Merv, I have determined that my book should be a mere abstract, and hence have excluded those celebrated men, whose histories may be found in works on the subject. I have not detailed men and things which perhaps should have been mentioned.

In the days of the Persian dynasty, the most renowned of physicians and of accomplished performers came from Eranshuhr ; as Burzooyuh, the first of doctors, and Barbod, the chief of singers aud of musical performers.

The provisions are better thau in any other portion of Khorasan, the bread in particular is fiuer and better tasted—while of its dried fruits and raisins, a large exportation takes place to other countries. Much is said of the productions of Herat and the plenty in other

countries; but the delicacy and flavour of Merv productions are superior. Of its fruits the melon is large and is exported to Erak; but I am not sure if it is carried to other countries.

As to the city, the cleanliness, the beauty of the place, the arrangement of the divisions and of the houses, the windings of the canals, the vineyards, the marked difference of the people of the bazars from those of other places, all stamp the superiority of Merv over other parts of Khorasan. On its deserts flourish the Turunjbeen which is carried over the world, as also are its fabrics of silk and its raw silk. But I have heard that the original source of the silk-worm is Jorjan and Tuberestan, whence it was brought long ago to Merv.

Raw Silk is now exported from Merv rood to Tuberestan, also the superior cotton called the Leyun cotton, and ready made sheets.

Merv possesses several ancient traditionist musjeds. Merv rood has two. Keshmehun, Hoormuz Kuruh, Seenuj, Khuzukh, Khuruk Shooshukan have each one house of prayer.

Herat.—This is the name of a city having various districts, among its towns are Malun, Jusan, Serteyan, Oobuh, Marabad, Pashtan, Korookh, Chesht, Esfezar, Udruskun, Gowazan, Kooshuk, Khorasanabad.

Esfezar is the name of a district containing the four towns I have mentioned.

Herat is surrounded by walls, with plenty of water, and a large population, it has also suburbs, and contains a fort and Jama Musjed, but the Government house is outside the walls at a place called Khorasanabad about one-third of a fursukh from the city on the road to Pooshung lying to the westward. The houses are erected from unbaked bricks, and each side of the city measures about half a fursukh.

The city has four gateways, that to the north on the Neeshapoor road is called the Erak, that on the road to Bulkh is named Kepchak. The gateway leading to Seestan is known by the name of Feroozabad, while that leading to Ghoor the Khoshuk. The doors are all of wood except the Erak which is covered with iron, at each entrance is a bazar for the use of the inhabitants of the neighbouring quarter of the city. Water runs through the towns and suburbs,

the fort has also four entrances opposite to, and known by the names of, the gates of the city.

Outside the fort runs a wall on each side, to the height of a man, and about thirty paces in breadth.

The Jama Musjed is in the centre of the city surrounded by bazars, while to the west of it is placed the jail. In all Khorasan, Seestan, Mavarulnahr and the Jubal districts, there does not exist to the present time a better frequented Musjed that the one of Herat. Next in estimation is that of Bulkh, then the musjed of Seestan.

This Herat Musjed is much frequented by a large body of the profession learned in matters of religion, the congregation conduct themselves after the customs prevailing in Syria, and have a religious discourse read on each Friday's assembly.

Herat is a grand halting place between Fars and Khorasan, also a central mart for these countries as well as for Seestan.

On the road to Bulkh about half a fursukh from the city there is a hill rising from the plain lying between Herat and Esfezar, it produces neither wood nor grass but merely stones for mills and floors. On the summit of this hill stood a fire temple called *Sershak;* between it and the city is a Christian church.

No water nor any gardens exist until you reach the canal of the city near the gate, which is crossed by a bridge; beyond this canal there is neither garden nor water.

Near all the gates irrigation being obtainable, gardens are numerous—the most populous is the Feroozabad gateway. The river of this district rises at the Robate Gorwan, and as it flows from Ghoor to Herat, many canals are cut from it as follows:

Canals.	Villages Watered.
Perwan, ...	Huwadushtuk. [Odwan.
Malun,.....	Kowashan, Seyawashan, Malun, Teezan,
Ulanjan, ...	Koosnan.
Kheyaban, ...	Sulbuh.
Kumburak, ...	Kookan.
Ghoorwan, ...	Zeeruk.
Tooneyan, ...	Ghooryan Kurugurd.
Subkur, ...	Ghazurwan and Feerozabad.
Unjeel, ...	The city of Herat and the gardens on the Seestan road.

Next to Herat the largest towns are Korookh and Oobuh, from the former are exported large quantities of raisins, of which the particular sort called zubeeb tayufee is also excellent at Malun.

Kurookh is a small place inhabited by a Khowarej population. The Musjed is located in the quarter belonging to the Seyuds, the houses are of unburnt bricks, the place itself is among the mountains, about a fursukh square filled with gardens, running water, trees, and populous villages.

Oobuh—the population is of the established Sonnee sect, the place is about the size of Kurookh with gardens, water and houses of unburnt bricks.

Malun is smaller than Kurookh, but covered with gardens containing water and plenty of grapes, always well peopled.

Jusan contains few trees and is less than Malun in size, the people are of the established sect.

Serteyan, the population is Khowarij, the place less in size than Malun, contains water and a few gardens, corn being more cultivated than fruit, as the situation is among the hills.

Marabad is a place less than Malun, contains many gardens and much water, rice is exported largely.

Pashtan is less than Malun, much grain cultivation, but few gardens exist, although water is plentiful.

Esfezar contains four towns, the largest being Kowashan which is less in size than Khorookh, but contains many gardens. Kowazan, Kooshuk, Edreskun, the other three places, are nearly equal in size, with water and gardens.

The district of Esfezar extends about four marches in length by one in breadth, it is highly populous, contains but little level land and has one difficult pass called Kashkan, this is inhabited by Khowarej families—while the population of the large towns is of the established sect.

Pooshung, its chief towns are Khushruo Gerd, Berkurduh, Koosweeyuh, Koh.

Pooshung is the largest and about the extent of half Herat; it is situated on a plain distant about two fursukhs from the range which passes Herat, the houses are level constructed much as those of Herat; water and trees are plentiful, one species called the *Urur*

is superior to that produced in any other district of Khorasan, and is exported in large quantities. The water is supplied from the Herat rood, a river which flows on to a place called Surukhs, unless when the water is turned off below that place, in which year it is not obtainable so low down its bed. Pooshung is surrounded by a wall and a ditch, having three entrances.

The Ulee gate on the Neeshapoor road, the Herat and the Kohestan on their respective roads.

The next town is Koosweyuh, in size about one third of Pooshung, containing water and a few gardens with houses of unburnt brick.

Khusruo Gerd abounds in gardens and water but is less in size than Koosweyuh—Berkurduh is still smaller with some water; the inhabitants are breeders of cattle and not agriculturists. Koh is equal to Berkurduh, has both cultivation and irrigation.

Badghues, contains the towns of Jubul-ul-fezut, Koh, Koghunabad, Best, Jadoo, Kaburoon, Kalyoos, Dehestan; the Sultan resides at Koghunabad; the largest and most populous place of these is Dehestan which is about half the size of Pooshung, with houses built of clay; the country contains much lead. The town is among the hills of little water and few gardens and no grapes, its cultivation depends on rain, similar to which are Koh and Jubul-ul-fezut of which the two former is the largest place, the latter is on a hill containing mines of silver not worked from the absence of fire wood, the former, Koh, is on a plain.

Koghunabad, Best, Jadoo possess gardens, water and upland cultivation, but Kaburoon and Kalyoos are without gardens or running streams, their water being obtained from ponds and wells. The inhabitants are agriculturists as well as breeders of cattle. Jubul-ul-fezut is situated on the road leading from Herat to Surukhs. The population of Badghues is all of the established sonnee sect, except that of Hujestan, and the village of Uhmud bin Abdallah who are all Khowarej.

Gunj Rostak is a district of which Buen is a town, as also Kuef and Bugshoor, the Soltan resides at Buen which is the largest place in the district and greater than Pooshung, to which place Bughshoor is about equal; Kuef is less than half Bughshoor; Buen and Kuef possess plenty of water, gardens and grapes, but the houses are of

clay. The water of Bugshoor is from ponds and wells, the place being situated on a plain: its cultivation is small, chiefly upland; but the situation is healthy and salubrious. All these places are on the road to Mervrood.

Mervrood—one of the towns is Kusre Ukhnuf, another Duruh, the largest being Mervrood. This place is smaller than Pooshung, it has the advantage of a large river which flows on to Merv-Shajiehan; on the river are many gardens containing plenty of grapes, the air and soil are salubrious.

Kusre Ukhnuf is situated one journey on the road to Bulkh. Duruh is on the road to Unbar at the distance of four fursukhs. Kusre Ukhnuf abounds in water, gardens, grapes and fine fruits. Duruh is watered by the Merv-rood which divides the town, and is crossed by a bridge: it abounds in gardens of grapes and fruits. Mervrood is about an arrow's flight from the river. Talkan is about the size of Mervrood with running water, and a few gardens, its houses like those of Mervrood are built of clay, than which place it is more healthy.

Mervrood is situated at a distance of three fursukhs from hills to the west, and of two from those to the east. Talkan is in the hills and has villages round it.

Faryab—is in size less than Talkan, but exceeds it in water and gardens, its houses are built of clay.

Joozjan is the name of a district, of which Yahoodeyah is a town, as also are Shuburghan, Undkhod, Usluj, Kundderem, Unbar, San. Of these Unbar is the largest, being more extensive than Mervrood, it is the residence of the Sultan and situated among the hills—having gardens, water and vines, but houses of clay. San is a place of no extent, with gardens and water, its chief fruits are walnuts, being among the hills.

Yahoodeyah is more extensive than San, but of the same description. Kundderem abounds in vines, walnuts and water. Shuburghan has running water, agriculture exceeds horticulture, but it is of greater extent than Kundderem. Murshan equals in size Yahoodeyah.

Seerokh is a town. Undkhod a small one on the plains having seven villages attached to it, containing houses of the Koord popu-

lation, who are breeders of cattle and camels, and also they manufacture hair numuds. Khorasan is supplied with leather from the districts of Joozjan, which are also very fruitful.

Shuburghan is one march to the north of Unbar. To reach Yahoodeyah from Shuburghan it is necessary to go to Unbar, thence to Yahoodeyah. From Shuburghan to Undkhod two marches to the north. From Shuburghan to Kundderem, four marches, viz. three to the river and one march beyond it.

Ghorjestan or Ghorjulshar has two towns, Busheer and Soormeen, both equal in size, but neither constitutes the residence of the Sultan; the Shar to whom this kingdom belongs, resides in the hills at a place called Gungan, the country has water and gardens in plenty, and much rice is exported from it. Large quantities of raisins are produced in Soormeen. Busheer is one march from Duruh of Mervrood.

Mutlugh is an arrow's flight from the river of Mervrood to the East. From Busheer to Soormeen is one march to the south among the hills.

Ghoor is a country of infidels, which I include in the country of Eslam, because there live some Mohummudans in it. The country is one of springs, gardens and rivers, very fertile. Towards the east in early days was a tribe which professed Eslam, but were not Mohummudans in heart.

Ghoor is bounded by the districts of Herat, Furruh, Zumeendawur, the Robat Gorwan in the country of Kureeghoon, Ghorgestan, back to Herat; all of which districts are inhabited by Mohummudans, hence have I mentioned Ghoor as in the very centre of Eslam.

Surukhs is a city between Neeshapoor and Merv—situated on a level plain; river water only reaches it in particular years, and is not permanent, being the excess of the water of the Herat river. Its cultivation requires no irrigation. The city is about half the size of Merv, populous and salubrious, the neighbourhood consists chiefly of pasture-lands round a few villages, the main wealth being camels. The town is a centre of traffic for the surrounding districts of Khorasan. The mills are turned by cattle, the water being from wells; the houses are built of clay.

Nesa is a town equal in size to Surukhs, cultivated, irrigated and

having plenty of gardens. Water runs through the houses, and the streets are clean. It has many large thriving villages, being situated on outskirts of the mountains.

Furawuh is a frontier post on the deserts of the Ghoz tribe of Torks; it is separated from all villages, but has a Jama-musjed, and is the station for a guard moving to a great distance for the protection of the people. The place is a Robat with no villages, and no population near it. A spring runs through the place. There exist neither gardens nor cultivation, except a little pulse on the spring. The guard is under the strength of one thousand men.

The Kohestan of Khorasan lies near the desert of Fars, there is no town of the name, but one is called Kaen, of which the dependencies are Jonabad, Tubus called Geeluk, Khoar, Tubus known as Museena.

Kaen is equal in size to Surukhs, it has houses of clay, with a citadel surrounded by a ditch, also a Jama-musjed, and a government-house in the citadel; its water is derived from springs, with a few gardens, and villages far separated, the climate is cold.

Tubus is inferior to Kaen in size, the temperature is warm and dates appear; the place is surrounded by a wall, but has no fort, its houses are of clay and its waters derived from kareez; its dates are larger than those of Kaen.

Khoar is in size less than Tubus, and near to Khost. The Jama-musjed is at Khoar; the houses are of clay with no fortifications or fort. The gardens are few and water from kareez—indeed the want of water is excessive; the people are cattle-breeders, the place being situated on the borders of the desert with no gardens.

Jonabad is greater than Khoar—the houses are of clay—villages and gardens exist with water from kareez. Tubus Geeluk is larger than Jonabad, there is water from kareez, and villages and gardens, and houses of clay. There exist the remains of an old fortification now in ruins, but a fort is standing. Dates are found in Kohestan, Tubus, and those places which I have mentioned as of cold climate. I have well examined all of them. The population is scanty as in other parts of Khorasan. On the confines of the district is a desert inhabited by Koords, who are breeders of cattle, as camels and sheep. On the boundaries towards Neeshapoor is found an earth which is exported for use, but not for food to distant countries.

I know of no large rivers in the Kohestan; they manufacture a species of earthen-ware which is taken to other places; also cloth of silk and cotton mixed, also much thread—but nothing else of value.

Bulkh, to which belong Tokharestan, Khotul, Punjheer, Budukhshan, Bameeyan.

Tokharestan contains Kholum, Sumunjan, Bughlan, Sukulkund, Wurwageer, Urhun, Raween, Talkan, Eshkemesh, Zuwa, Serae Asem, Chesht, Indurab, Muzur, Gah.

Khotul contains Holawerd and Lawakund, towns of Wukhsh, Karteel, Ulyan, Huleel, Sekundurah, Meel, Undecharagh, Roostak Neel, sometimes Khotul is joined to the districts of Mawazlnuhr.

Bameeyan contains Bameeyan, Lushghorkund, Segawund, Kabul, Nujruo, Perwan, Ghuznee, Punjheer.

Budukhshan has a capital of the same name and is the country of Abu ul Futuh.

Bulkh lies on a plain about four fursukhs from the nearest hills called the Guz. The city has walls and ramparts with a Musjed ul Jama in the centre of the city surrounded by bazars, between which live the people. The length of the city is about half a fursukh, the houses are of clay. The gateways are called Nuo Bahar, Rukhnuh, Hudeed, Hindoo, Yuhyood, Shustbund, Yuhya. A canal called Rohaneen enters the ramparts at the Nuo Bahar gateway: it is capable of turning ten mills, and irrigates as far as the village called Seyahgerd.

The gateways are surrounded by gardens and vineyards, the walls have no ditch and are built of clay.

Tokharestan; the largest place is Talkan, situated on a plain at an arrow's flight from the hills, it possesses a large canal with gardens and vineyards, being about one-third the size of Bulkh; next in extent is Wurwageer and then Indurab which is situated in a gorge of the hills; it is a mart for the silver found in the mines of Jaryanuh and Punjheer; two rivers flow in this district called the Indurab and Kasan; vines and fruit-trees are plentiful. All the other places of Tokharestan are much of the same magnitude, but all less than Talkan. Wurwageer and Indurab are at the heads of springs containing fruit-trees, much cultivation, and a large population.

The towns of Khotul are all well supplied with springs, trees and population, they are all situated on plains, except Sekundurah.

The Jubal or hill-districts of Khotul are all mountainous, except about Wukhsh.

The large towns of Khotul are Meel, Ulyan, Huleel; the Sultan resides at the last named place. Khotul is situated between the streams Wukhsh and the river of Budukshan, which is also called Khurab. Near this district flow many streams which all unite a little above Termez near Kobadeyan and form the great river called Juehoon.

Meel is about the size of Indurabuh, Huleel less—the houses of both are built of clay, but the walls of Meel are of stone and mortar. Two districts of the Kafirs called Wukhan and Gharan are adjoining.

Budukshan is less than Meel in size, it has many villages, vineyards, a large population and cultivation with plenty of water,—being situated on the river Khurab flowing to the West. Khotul exports large numbers of cattle; and produces abundance of lapis lazuli and rubies from mines in the hills. Musk is imported by the road of Wakhan from Tubbut.

Punjheer is a place in the hills inhabited by ten thousand men chiefly robbers and thieves. There are streams and gardens but no cultivation.

Jaryanuh is a smaller place than Punjheer,—both contain mines of silver and houses for the men employed in the mines, they have no gardens or cultivation. The river of Punjheer runs through the district of that name, then flows into Jaryanuh, and passing Perwan, enters India.

Bameeyan, its city is about half the size of Bulkh. This district is called Sheer Bameeyan; the town is without walls built on a hill, a rivulet flows through it into Ghorgestan—fruits are imported, it having no gardens. There is no town near at hand situated on the hills except Bameeyan.

Guznee has no gardens but a stream flows near it; none of the places under Bulkh are more rich or more commercial than Guznee, which is a mart of India.

Kabul has a strong fort of one entrance, in which reside Mohummadans; with suburbs in which reside Hindoos. It is settled, that

the king has no right to the kingdom unless he is residing at Kabul on attaining it—should he be at a distance, he does not obtain the power until returning to Kabul. This city is also a grand emporium of Indian produce. Bulkh produces the Bactrian camel, superior to those of any other district, also oranges, water-lilies and sugar-cane, which are products of warm climates, but no dates. Snow falls in the neighbourhood. Nugruo, Segawund and Kabul are warm climates but still produce no dates.

Ghoor is surrounded on all sides by Mohummudan countries, but the inhabitants are infidels, except a few who pass for Mohummudans.

The country is of mountains; their language is different from the Persian language; the earth is fruitful in crops, cattle and flocks. I have admitted it into Khorasan, because it is surrounded on three sides by this country, one boundary is Seestan.

Most of the slaves from Ghoor are carried to Herat or Seestan or in those directions. At the back of Ghoor, stretches a range of mountains reaching to Bameeyan, Punjheer and Wakhan.

It then passes into Mawazolnuhr crossing Sar and Shash, and concluding in the country of the Khurgheez.

This range from beginning to end contains mines of silver and of lead. The most pure comes from the country of the Kherkheez, Ferghanah and Shash; but the best obtainable in Mohummudan countries is from Punjheer and its dependencies.

I will sketch the banks of the Juehoon and Kharism in my account of Mawazolnuhr.

Amol and Zum are two places of equal size on the banks of the Juehoon, having running water, gardens and cultivation. Amol is the point of meeting of the various roads from Khorasan. Zum is less populous than Amol, it is also a well known ferry. These places are surrounded by the desert which extends from Bulkh to the sea of Kharism—the soil is chiefly sandy, with no springs, only a few ponds and wells for water and pasture-lands. This desert reaches back to Merv from Amol. A similar one also separates these districts from Kharism and the countries of the Ghoz tribes. Wells are dug and much cattle are produced, but the best breed of camels in Khorasan is from Surukhs and Bulkh. The sheep are mostly imported from the Ghoz districts, from Ghoor and from Khuluj.

In Khorasan are found abundance of cattle, slaves, food, clothing and all that is necessary for man.

		Marches.
From Koomis the first district of Neeshapoor	To the banks of the Juehoon,	23
„ Neeshapoor	„ Esferayun the second district of Neeshapoor, ...	5
„ Neeshapoor	„ Boozjan, ...	4
„ Boozjan	„ Pooshunj, ...	4
„ Pooshunj	„ Herat, ...	1
„ Herat	„ Esfezar, ...	3
„ Esfezar	„ Duruh, the last district of Herat, ...	2
„ Duruh	„ Seestan, ...days	7
„ Esferayun	„ Duruh,.....	19
„ Neeshapoor	„ Toos, ...	3
„ Neeshapoor	„ Nesa, ...	6
„ Nesa	„ Furawuh,.....	4
„ Neeshapoor	„ Kaen of Kohestan,.....	9
„ Kaen	„ Herat, ...	8
„ Merv	„ Mervrood, ...	6
„ Merv	„ Herat, ...	12
„ Merv	„ Abeewurd, ...	6
„ Abeewurd	„ Nesa, ...	4
„ Herat	„ Mervrood on the Bulkh road	6
„ Herat	„ Surukhs, ...	5
„ Bulkh	„ Mervrood, ...	12
„ Bulkh	„ the border of the desert to Termez, ...	2
„ Bulkh	„ Endurabuh,.....	9
„ Bulkh	„ Bameeyan, ...	10
„ Bameeyan	„ Guznee, ...	8
„ Bulkh	„ Budukshan,.....	13
„ Bulkh	„ the border of the desert on the road to Khotul at a place called Eeluh,	3

Khorasan extends in latitude from Budukshan lying on the Juehoon to the lake of Kharism.

From Budukshan	To Termez on the river, ...	13
„ Termez	„ Zum, ...	5
„ Zum	„ Amol, ...	4
„ Amol	„ the capital of Kharism,...	13
„ The capital	„ the lake of Kharism, ...	6

I have thus stated the distances between the well known cities, I now proceed to the towns situated in each district.

NEESHAPOOR.

„ Neeshapoor	„ Boozjan, ...	4
„ Boozjan	„ Malun called Kisrajerd on the left of the road from Herat to Neeshapoor,...	1
„ Malun	„ Khaemun, ...	1
„ Khaemun	„ Sungan, ...	1
„ Sungan	„ Jonabad, ...	2
„ Jonabad	„ Kaen, ...	2
„ Suloomul is situated two days to the left of Sungan, ...		2
„ Suloomul	„ Zoozan, ...	1
„ Zoozan	„ Kaen, ...	3
„ Neeshapoor	„ Tersheez,.....	4
„ Tersheez	„ Kunduz, ...	1
„ Kunduz	„ Jonabad, ...	2
„ Jonabad	„ Kaen, ...	2
„ Neeshapoor	„ Khushruogerd, ...	4
„ Subzwar is two fursukh from Khusruogerd.		
„ Khusruogerd	„ Buhmunabad, ...long	1
„ Buhmunabad	„ Moobedan on the road to Koomis fursukh,.....	1
„ Neeshapoor,	„ Janruwan, ...	1
„ Janruwan,	„ Mehrjan, ...	2
„ Mehrjan	„ Esferayun, ...	2
„ Buhmunabad	„ Azadwar,.....	1
„ Azadwar	„ Reewaduh, ...	1
„ Reewaduh	„ Mehrjan, ...	2

MERV.

From	Merv	To Keshmehun, ... march	1
„	Keshmehun	„ Hormuz-Kuruh, near it, is the road leading over the desert to Kharism, fursukh, ...	1

Pashtan lies in front of Hormuz-Kuruh at a fursukh from the road. Seenuj is situated one march from the city between the grand road, and the Surukhs road. Khuzukh is a place six fursukhs from the city, one fursukh in front of Zoruk on the desert.

Mervzum is situated four fursukhs from the city on the desert.

Dundafkun is one march from the city on the road to Surukhs. Kurshee lies four marches from Merv on the desert.

Khuruk, three fursukhs from the city between the road to Surukhs and Abewurd.

Shooshukan lies at a distance of a fursukh from Khuruk.

HERAT.

From	Herat	To Esfezar, contains 4 places already mentioned, each less than one march in extent,.....	3
„	Herat	„ Malun,.....	½
„	Herat	„ Kurooj, ...	3
„	Herat	„ Pooshung, ...	1
„	Pooshung	„ Koh, two fursukhs on the left of the Neeshapoor road,.....	4
„	Pooshung	„ Burkurduh,.....	2
„	Burkurduh	„ Khushruogerd, ...	2
„	Khushruogerd	„ Zoozun, ...	1
„	Herat	„ Pashtan of Herat, ...	½
„	Pashtan	„ Jusan,..... easy	1
„	Jusan	„ Serteeyan, ...	1
„	Serteyan	„ Marabad,..... easy	1
„	Marabad	„ Oobuh,..... easy	1
„	Oobuh	„ Chesht, ...	2

From Chesht the country of Ghoor commences.

„ Herat	„ Buenuh, ...	2
„ Buenuh	„ Kuef, ...	1
„ Kuef	„ Bugshoor, ...	1

BULKH.

„ Bulkh	„ Kholum, ...	2
„ Kholum	„ Wurwageer, ...	2
„ Wurwageer	„ Talkan, ...	2
„ Talkan	„ Budukshan,.....	7
„ Kholum,	„ Sumunjan, ...	2
„ Sumunjan	„ Endurab,.....	5
„ Endurabuh	„ Jaryanuh, ...	3
„ Jaryanuh	„ Punjheer,.....	1
„ Punjheer	„ Perwan, ...	2
„ Bulkh	„ Buglan, ...	6
Two marches to Sumunjan then Bughlan, ...		2
„ Bulkh,	„ Mudur, ...	2
„ Mudur	„ Kah,.....	1
„ Kah	„ Bameyan,.....	3
„ Bulkh	„ Shuboorgan,.....	3
„ Shuboorgan	„ Faryab, ...	3
„ Faryab	„ Talkan,.....	3
„ Talkan	„ Mervrood, ...	3

KOHESTAN.

„ Kaen	„ Zoozun, ...	3
„ Kaen	„ Tubbus Meseena, ...	2
„ Kaen	„ Khoor,.....	1
„ Koor	„ Khoost, ...fursukhs	2
„ Kaen	„ Tubbus,..... marches	3

NOTES.

NEESHAPOOR.

The glory of Neeshapoor must indeed have faded away. According to Fraser, hardly a trace remains of the various neighbouring cities passing under this name, unless perhaps mounds of debris with two shrines of Mohummudan saints can be so termed. The trade has entirely vanished, and now consists in the traffic of the turquoise

found in the mines—the circuit of the present wall is 4000 paces, the population under 20,000 souls, the entire revenue being estimated at a lac of Tomans.

In the Nozhut-ul-Koloob it is stated, that Shahpoor ben Ardesheer in renovating this city carried on the ancient custom of laying out cities on the form of some animal, or visible article; in this case, the squares of the chess-board were adopted. Bulk subsequently assumed the position of capital of Khorasan, until Omur ben Lues restored this dignity to Neeshapoor. One of the numerous new cities had the name of Shadbagh—it was destroyed by an earthquake in A. H. 679, after this arose the present town which has been absorbed in the modern Mushud. Every book contains long descriptions of the beauties and delights of the springs and gardens of Neeshapoor.

Boozjan or Boochgan, on the high road to Herat at a distance of 38 fursukhs from Neeshapoor according to the Nozhut-ul-Koloob. *The Bezk* of Burne's map (?) also noted as a district of Jam. Four roads take off from this place; to Herat, Kaen, Surukhs, and Bakhurz.

Khaemund, doubtful. Burne's Map exhibits Kahmah near the required position.

Suloomul doubtful. Salama of the Maps?

Sungan. Sungoon of the Maps—mentioned by Christie, a place in Zawuh.

Zoozan is noted on Burne's Map, but too far to the north of the position required. The interpolation of places by correct European latitudes and longitudes, among locations from native authorities has this effect of transposing positions. All places connected, require to be reduced in the same ratio of the newly determined place.

Tersheez was visited by Forster, who says the old capital was called Sultan Abad, of small compass surrounded by a wall.

Dure Mushkan, a fort of this name between Neeshapoor and Subzwar is mentioned in the Nadir Namuh.

Azadwar is noted as eight fursukhs from Jajerm, the first march on the road to Neeshapoor.

Khushruogerd is noticed by Fraser, a fort of great antiquity with dclapidated minars and extensive ruins.

Buhmunabad Map.

Muzneyan, Muzeenoon of Fraser, a place surrounded by extensive ruins.

Subzwar is the central town of a district known as Beehuk; found by Fraser a field of ruins, with the tombs of several saints of Eslam alone preserved, said to have been built by Sasan ben Buhman.

Rewaduh, probably the Rewat of the Maps.

Esfurayun, a district thirty or forty miles N. E. of Subzwar, both names are now used in common. The Nozhut-ul-Koloob mentions a large stone vase of four yards in diameter as a curiosity.

Khuer Khan very doubtful, unless it be Khur or Khuer Shah twenty miles from Azadwar on the road to Neeshapoor, a place of the district of Joweeruh once a portion of Beehuk.

Zurmuluh unknown and doubtful.

Toos, is recorded by Fraser as exhibiting a large area of debris surrounded by walls yet standing. The name and indeed the city are ascribed to Toos ben Nuozur. This city has been ever celebrated as the birth or resting-place of men of talents or of piety. The poet Ferdousee, and numerous Mohummudan saints are buried within its walls.

Radgan seen by Fraser about forty-three miles W. by N. of Mushud.

Taburoon, Burooghoor, Nookan, Sunabad.—The modern town of Mushud, now a place of pilgrimage, has entirely arisen on the proceeds of the shrine; it must occupy the position of the Sunabad mentioned, the little detail given by our author of the shrine with the absence of all mention of the tomb of Ferdousee at Toos, point to a date prior to which the work must have been written.

Merv.

We have some account of this place in the travels of Sir Alexander Burnes and party. They arrived at the river thirty miles below the city and found it a fine stream, eighty yards wide, five feet deep. The country between the Oxus and this point having been a dry arid plain. But round the town of Merv were scattered for miles the remains of ancient forts and villages, with the marks of extensive cultivation; when this existed, the waters of the river were nearly exhausted for irrigation. The houses of the villages and

towns were all of un-burnt bricks, the population resided chiefly in black felt tents; a few families of Jews were found in several of the larger places.

The country continued to rise in level from the Oxus until reaching Surukhs—a ruined town of mud houses under a fort on a hillock of no importance. The population had changed from the fixed habits of towns to the wandering propensities of the tents. The distance was calculated as 125 miles from the Charjoee ferry of the Oxus to Merv, and 68 thence to Surukhs. The waters of Surukhs are from a river called Tejend, rising in the hills lying to the North of Neeshapoor and hence unlikely to be joined by a river like the Hureerood coming from the opposite direction on the South side of the range. The lands about Surukhs were considered to be fertile to an extraordinary degree: the place was able to send forth 4000 horsemen. All the splendour narrated by our Arabian author had disappeared before the ravages of the contending Tatar and Tork tribes. The clay-built houses had melted away under snow and rain, the canals were choked up, the fields affording precarious subsistence to wandering hordes of Toorcomun robbers. From Surukhs to Mushud was considered 64 miles. Capt. Abbott gives to the lands of Merv 2,400 square miles, a population of 60,000 Toorkoman families, paying two lacs of rupees per annum, revenue.

Kurshee, is here distinguished from the Kurshee of Bokhara and is given in the Nozhut-ul-Koloob as four marches or twenty-five fursukhs from Merv.

Walee Maoonuh. The only point of comparison I can reach is this—on the Huj road to Mecca exists a celebrated well, called the Bere Maoonuh, on the waters of which the pilgrims much depend, hence the Meerab or Canal Master of Merv may be considered as of equal importance to the owner of this well.

Arched Room.—This place is mentioned in the Nozhut-ul-Koloob.

Mamoon.—Merv was also the capital, subsequently, of the Seljook dynasty.

Surukhs is given in the Nozhut-ol-Koloob as founded by Afraseyab, and watered by a continuation of the rivers, both of Herat and Toos. The extraordinary fecundity of the soil is extolled, that one mun would return one hundred muns, and either from the roots or

the scattered seed, thirty more could be collected in the following season.

HERAT.

The city has been altered since this description was written, the names of the gates, of the canals, and of the villages given in the translation are such as I believe to be intended and to be correct, I have compared them with the names given in many books. Marabad is the Marwan of the Map.

Esfezar—Arthur Conolly mentions Kooshuk as a small fort situated in a fertile plain of twenty miles in breadth.

Subzwar is a town of one thousand houses.

Pooshung was the capital of the family of Taher, which for several generations was all-powerful in Khorasan. The Nozhut-ul-Koloob contains Kooswee, Khushruogird, and Burooh as its subdivisions, the second I adopt and the latter may have connection with Burkurduh. But Mohun Lal mentions Furuhabad to the South of Khaff, which is about the requisite position, and points to Furuhgerd as the correct reading, perhaps Ferhadgerd.

Kooswee was passed by Arthur Conolly in ruins, at seventy miles from Herat. It was once a place of importance and stood a long siege from Jungeez Khan.

Urur, one dictionary offers the Surv or cypress-tree for this word.

Hureerood, it appears to be settled, that this river does not run so far as to reach Surukhs; and its junction with the Tajend to be a misconception, or at any rate doubtful, as the country rises from Herat towards Mushud.

Badghues—the readings with the exception of Koh are nearly all confirmed by the Nozhut-ul-Koloob. The district is an extensive one to the North of Herat.

Hujestan is noted in a history of Herat.

Gunjrostak appears to form a large division of country lying between Badghues and the Moorghab river.

Bughshoor.—The Nozhut-ul-Kolook has Buhreshoor in the required position—which is about the Awsharuh of Wyld's map. Native authority is in favour of Bughshoor—I incline to Buhreshoor.

Buen and Kuef are unknown.

MERVROOD appears never to have been visited, hence many of the subdivisions cannot be identified.

Ukhnuf bin Kues—a celebrated Arab leader of early period, the place is identified in the Nozhut-ul-Koloob at three fursukhs from Mervrood.

Talkan lies 18 fursukhs east of Merv, yet this meanly mentioned place took the entire army of Jungeez Khan seven months to capture.

Faryab stands at 40 fursukhs East of Merv on the Bulkh road.

Joozjan is a large district between Merv-road and Bulk round Muemoonuh as a centre.

Unbar, we have a place in Ezzut Allah, and on the maps, and constantly mentioned by horse-dealers, Ulmar, which may be the Unbar indicated by the text; and the Humber of Wyld's map.

Yahoodeyuh, a large body of Jews are known to have accompanied the armies of Seleucus, and to have been settled near Merv; this Yahoodeyuh may constitute their location.

Ghorgestan; it was a most difficult affair to reach the meaning of this sentence, but I find it mentioned in the fourth volume of the Roozut-ul-sufa that the people of Ghorgestan called their kings, Shar, even as Torks use Khan, and Hindus Rae. I can offer no confirmations of my readings, except that Wyld's map contains a place called Soormeen though not quite in the position required.

Nesa, Furawuh, are known by name but not identified.

Kohestan.—Jonabad, is the Arabised form of Goonabad, a town said to have been constructed by a son of Goodurz. It is defended by a fort on an eminence.

Tubus called Geeluk appears to be the Tubus of Wyld's map to the West of Kaen, it is said in the Nozhut-ul-Koloob to be seven days' march from Yezd, a distance which Captain Christie covered in that time, and calls about 145 miles—this traveller skirted the district of Kohestan, and indicates the want of water, the deserts of sand, but no absolute deficiency of supplies.

Kaen is put down as a large city of a warm climate, and very fruitful, in Lat. 33° 40′; the inhabitants are very warlike and possessing, each man, instruments of war.

A more modern work gives the subdivisions of Kohestan as Choon, Toon, Tubus, Dushtebeyaz, Neyarjan, Moomenabad, Shakhuen, Jonabad, Zeerkoh, Peeshawur.

This district became the centre of the noted sect or tribe of Esmaeeluh or Mulaheduh; the assassins of European story.

Bulkh.

Bulkh is considered to be the capital of the ancient Bactria. In Moslem history, this city has ever been highly celebrated, even called the Paradise of the world. The old ramparts and castle, went by the name of the Hindoo fort, it was destroyed by Ukhnuf ben Kues, a new city then arose under the order of Aboo-Moslem the governor of Khorasan. On the high road of contending armies, its vicissitudes have been numerous; it now lies under the ban of "ruin and decay with no remains of interest beyond its name." The numerous gates mentioned, will be of the fort and of the town. The designation to the hills of Koo, is a fragment probably of Hindoo Koosh—or may be Gor or Guz the last I take as the valley of the Bulkhab is called Guz.

Sumungan, according to Moorcroft is now designated Uebuk—"the first view of Uebuk was rather imposing, presenting a castle on an insulated eminence"—it proved to be in ruins, but to possess some claims indicative of its antiquity.

Wurwageer is doubtful, by the distance and bearing, it would fall near the position of the modern Kundooz in the direct line from Bulkh to Budukshan.

Shuboorgan is mentioned by Marco Polo.

Wukhsh, the arch type of Oxus is apparently beyond the river of that name, lying N. W. from the stream at no great distance.

Khotul.—The Khotlan of the maps, is a large district lying on the bend of the Oxus above Budukshan, near the spot marked Durwaz—the town of the name is mentioned in the Nozhut-ul-Koloob as an important place but in ruins.

Khuryab has a local authority attached, as Khurgeez the wandering tribes of the steppes of the Poshte Khur of the Pameer range.

Budukshan is a well understood district, the Balashan of Marco Polo.

Talkan is "a small place under a fort of no importance," perhaps four hundred houses.

Eshkemesh is probably the Scassem of Polo, but Wood places an

Eshkashem to the East of Fuezabad, which better answers the position required by the Venetian.

Budukshan town, according to Wood, "hardly a vestige remains of the modern capital, Fuezabad" which once occupied a commanding position on the left bank of the Koksha or Khur river.

Wakan is clearly the Vokan of Polo, whose description is most wonderfully authenticated at a distance of six centuries by the highly interesting narrative of Capt. Wood of the Indian Navy—a companion of Burnes.

Gharan is mentioned by Wood as the district of the ruby mines, which are located on the South face of the mountains of Shughnoon, the Sikinan of Polo who also notices the same fact.

Rubies.—Budukshan has ever been celebrated for the rubies and lapis lazuli of its mines.

Jaryanuh—I adopt in preference to Haryanuh, on the authority of Wood, who mentions the district and village of I-angheran at the South end of the Perwan and Punjheer valleys.

Punjheer, exactly as described by Wood, and has not improved since the days of our Arabian author, except perhaps in population, as the former gentleman considers the valley could turn out 10,000 armed men. The fort of Khawak captured by Timoor is situated near the top of the pass.

Bameeyan.—The reader is rather surprised to find no mention of the celebrated idols cut in the hill-side.

Kabul.—The fort with one entrance is probably that now known as the Akabeen or upper fort of Kabul, now but little used, being the enclosed summit of the range which would otherwise command the modern fort.

Lushghorkund is most likely the modern Lhoghur.

Ghor, is now occupied by Huzaruhs who speak very pure Persian.

Sar of Torkestan is doubtful.

Ghoz tribes, they were located on the sources of the Utturuk river.

Most of my readings are acknowledged by men of Bokhara to be such as they have heard mentioned, but several names are extremely doubtful as Sukulkund, Wurwageer, Undechuragh and others.

واما خراسان

فانها يشتمل على كور وهو اسم الاقليم والذى يحيط بها من شرقيها نواحى سجستان وبلدالهند لانا ضممنا الى سجستان ما يتصل بها من ظهرالغور كله الى الهند وجعلنا ديار جاج فى حدود كابل وفرجان فى ظهرالجبل كله وغير ذلك من نواحى وغربيها مفازة غزنه ونواحى جرجان وشماليها ما وراء النهر وشى من بلدالبرل على ظهرالختل وجنوبيها مفازة فارس وقومس وضممنا قومس الى نواحى الديلم مع جرجان وطبرستان والرى وقزوين ومايتصل بها وجعلنا ذلك كله اقليما وضممنا الختل الى ما وراء النهر لانها بين نهروخشتار وحوبار وضممنا خوارزم الى ما وراءالنهر لان مدينتها ما وراء النهر وهى اقرب الى بخارا منها الى مدن خراسان وبخراسان فيما يلى المشرق زفقة فيما بين مفازة فارس وبين هرات والغور الى غزنه ولها زفقة فى المغرب من حد قومس الى ان يتصل بنواحى فراره وفيفص هاتان الزفقتان عن تربيع سائر خراسان وفيها من حد جرجان وبحرالجرر الى خوارزم

تقويس على العمارة وهذه صورة خراسان

واما كور خراسان التى تجمع على الاعمال وتفرق فان اعظمها نيشاپور ومرو وهرات وبلخ وبخراسان كور دونها فى الكبر فمنها قوهستان وطوس ونسا وابيورد وسرخس واسفرار وبوسنج وباذغس وكخرساق ومروردد وجرجان والباميان وطخارستان والزم وامل *

واما خوارزم فانها نذكرها فيما وراءالنهر لان مدينتها وراءالنهر وهى الى مدن ما وراءالنهر على السمت اقرب منها الى مدن خراسان ونسانور كور لم نفردها لانها مجموعة اليها والاعمال سنذكرها فى صفة نيشاپور وافردنا طخارستان عن بلخ وانكانت مجموعة اليها لانها مفردة فى الذكر والدواوين فيقال بلخ وطخارستان وليس فى تفريقنا هذه الكور وجمعها درك اكبر من اسانها وتاليفها فى الصور ومعرفة مكان كل شى منها فى صورة خراسان فاما نيشاپور فهى ابر سهر وهى مدينة فى ارض سهله ابنيتها طين وهى مفترشة البنا ومقدار عرضها نحو فرسخ فى فرسخ ولها مدينة وقهندز وربض وقهندرها ومدينتها عامرتان ومسجد جامعها فى الربض بمكان يعرف بالمعسكر ودارالامارة بمكان يعرف بميدان الحسن والحسين عند دارالامارة وبين الحبس ودارالامارة وبين المسجد

الجامع نحو فرسخ ودارالامارة من بناء عمر بن الليث والقهندر بابان وللمدينة اربعة ابواب احدها يعرف بباب راس القنطرة والثانى بباب معقل والثالث باب القهندر والرابع قنطرة در منكين وقهندرها خارج عن مدينتها ويحيط بالمدينة والقهندر جميعا الربض وللربض ابواب فاما الباب الذى يخرج منه الى العراق وجرجان فانه يعرف بباب القباب والباب الذى يخرج منه الى بلخ ومرو وما وراء النهر يعرف بباب حبل والثانى الذى يخرج منه الى فارس وقوهستان فانه يعرف بباب احوص اباز والباب الذى يخرج منه الى طوس ونسا عدة ابواب فمنها باب سوخته وباب يعرف بسر شيرين وغيرهما *

واما اسواقها فانها خارج من المدينة والقهندر فى الربض واعظم اسواقها سوقان احدهما يعرف بالمربعة الكبيرة والاخر بالمربعة الصغيرة واذا اخذت من المربعة الكبيرة نحو المشرق بالسوق يمتد الى ان تجاوز مسجد الجامع واذا اخذت من المربعة نحوا المغرب بالسوق يمتد الى ان تجاوز المربعة الصغيرة واذا اخذت من المربعة نحوالجنوب فالسوق يمتد الى قرب مقابرالحسنين ويمتد السوق من المربعة فى شماليها حتى ينتهى الى راس القنطرة والمربعة الصغيرة بقرب ميدان الحسنين جنب دارالامارة واكبرميا هما قنى تخرج تحت مساكنهم ويظهرخارج البلد فى ضياعهم وبها قنى يظهر فى البلد وتجرى فى دورهم وبساتينهم داخل البلد وخارجا عنه ولهم نهركبيريعرف بوادى سغادر يسقى منه بعض البلد ورساتيق كثيرة وعلى هذا الوادى توام وليس لهم فى البلد نهر اعظم منه *

وليس بخراسان مدينة هواء اولا اكبر من نيشاپور ويرتفع منها من اصناف ثياب القطن والابريسم ما ينقل الى سائر بلدان الاسلام وبعض بلاد الشرك لكثرتها وجودتها *

ولنيشاپور حدود واسعة ورساتيق عامرة وبها مدن منها النورنجان وماء ان المعروف بكراجرد وحاتمند وسلومل وسكان وزوزن وكندز وبرسير وحان را ان وازاذوار وخسروكرد ونهمناناد وسا دوار ومرسان وديواذه وسحرجان واسفراس وجنرجان ورزبله وان جمعنا طوس الى نيشاپور فمن مدنها الرابكان والطابران وبز وعور والنوفان التى بها قبر على ابن موسى الرضا عليهما السلام وقبر هارون الرشيد ومنها يرتفع البرام وقبر

الرضا من المدينة على نحو ربع فرسخ بقرية يقال لها ساباد و فى جبال نيشاپور و طوس يكون الفروزج و امامر و فانها تعرف بمرو الشاهجان و هى قديمة البنا يقال ان قهندرها من بنا طهمورث و ان المدينة قديمة من بناذى القرنين وهى فى ارض مستوية بعيدة عن الجبال لايرى منها جبل و ليس فى شى من حدودها جبل و ارضها سبخة كثيرة الرمال و ابنيتها طين و فيها ثلثة مساجد الجماعات اما اول مسجد اقيمت فيه الجمعة فمسجد بنى داخل المدينة فى اول الاسلام فلما كثر الاسلام بنى المسجد المعروف بمسجد العتيق على باب المدينة و يصلى فيه اهل الحديث و نزلت الجماعات فى المسجد الاول و يعرف بمسجد بني ماهان ثم بنى بعد ذلك المسجد الذى على ماهان و يذكران ذلك المسجد و السوق ودار الامارة من بنا ابى مسلم و دار الامارة على ظهر هذا المسجد و فى هذه الدار قبة بناها ابو مسلم كان يجلس فيها و الى هذه الغاية يجلس فى هذه القبة امراء مرو و هى قبة من آجر و سعة هذه القبة لم يذكر المساحة و منص لها من داخل نيصبه السطح و للقبة اربعة ابواب كل باب الى الوان سمك كل الوان *

وبين يرى كل الوان صحن مربع و القهندر فى الكبر مثل مدينة الا انه خراب و هو مرتفع و على ارتفاعه قد سبقت اليه قناة ماء جار الى يومنا هذا و ربما زرع عليه صاطيخ و مبا قل و غير ذلك *

و اما اسواقها فانها فى القديم كانت على باب المدينة جنب المسجد العتيق فانتقلت فى ايام ابى مسلم الى ماحان و اسواقها من انظف اسواق الامصار و مصلى العبد فى محلة راس الميدان فى مربعه الى الجهم و يطيف بهذا المصلى من جميع وجهاته البنيان والعمارات وهو بين نهر هرمرفوه وما حان و ارباع البلد انهار معروفة فمنها نهر هرمرفوه و هو نهر عليه ابنية كثيرة من البلد وهو ممايلى سرخس فى اول مايد خل الداخل من سرخس وهى ابنية كثيرة كان الحسين بن طاهر بنا فيها تلك الابنية واراد ان ينقل اليها السوق و دار الامارة و من هذا النهر شرب محله راس الشاباى الذى فيه دور الشيخ الجليل ابى الفضل محمد بن عبيدالله ومنها نهر يعرف بالماحان وعليه دار الامارة و الاسواق و المسجد الجامع المحدث و الحبس و على هذا النهر دارال ابى النجم مولاء ال ابي معيط و هى الدار التى فيها القبة التى صنع

فيها سواد دعوة بنى العباس والقبة باقية الى اليوم ومنها نهر يعرف بالزريق و مجراه على باب المدينة ومن هذا النهر يشرب اهل المدينة سان ومن هذا النهر الى حياض فيها وعلى هذا النهر المسجد العتيق ومن اسفل هذا النهر قصورا ل خالد بن احمد بن حماد الذي كان على امارة بخارا ومنها نهر يعرف باسعدى الخراساني واليه شرب محلة باب سحان وبرماهان وغيرها وعلى هذا النهر كانت دور مرزبان مرو فهذه انهار مرو التى عليها محال البلد و ابنيتها وعلى هذه الابنية سور يحيط بها وبهذه الاربعة الانهار ويحيط بهذه المدينة ورساتيقها سور اخر يشمل على جميع رساتيقها يعرف بالراى وترى اثار هذا السور الى هذه الغاية وللمدينة الداخلة اربعة ابواب فمنها باب يعرف بمايلى مسجد الجامع وباب حمى وباب سنجار وباب يسما باب بالين وباب درمسكان ومن هذا الباب يخرج الى ما وراء النهر وعلى هذا الباب مسكن المامون ومضربه ايام مقامه بمرو الى ان انتهت الخلافة اليه ولمرو نهر عظيم ينشعب هذه الانهار كلها وانهار الرساتيق منه ومبتداؤه وراء البا ميان ويعرف هذا النهر بمرعاب اى بامر ومن الناس من يزعم ان النهر منسوب الى مكان يخرج منه الماء يسمى بمرعاب ومنه من يقول بزعم تفسير مرغ اجمه ومجرا هذا النهر على مرورود وعليه ضياعهم واول حد هذا النهر من عمل مروكوكين بين حورا ن من مرو والفرسى من مرو ومقاسم هذا الماء من رزق قرية بها مقسم ماء مرو وقد جعل لكل محلة ومنكة من هذا النهر نهر صغير عليه الواح خشب فيها سقب يتساوى بها الناس فى تناول حصصهم من الماء فان زاد احد كل شرب نصيبه من الرمادة وكذالك اذا نقص وهولا هذا الماء امير على حدة وهوا جل من والى المعونه بلغنى انه بربزق على هذا الماء زيادة على عشرة الاف رجل لكل واحد منهم على هذا الماء عمل وكانت مرو معسكر الاسلام فى اول الاسلام وفيها استقامت مملكة فارس للمسلمين لان يزد جرد ملك الفرس قتل بها فى طاحونة رزق ومنها ظهرت دعوة بنى العباس وفى دار ال ابى النجم المعنطى صبح سواد ليس المسودة وفيها جاءت المامون الخلافة وظهر على اخيه محمد بن زبيدة ومنها عامة قواد الخلافة وكتابها بالعراق ولولاه خراسان ومنها ائمة من الفقهاء واهل الادب معروفون ولولا انا بينا كتابنا على التجوز وان الذى تركنا شرحه هو معروف

فى الاخبار و الكتب الموافقة لشرحنا من طبقات الناس و سائر ما احملنا ذكره و فى ايام العجم كانوا مقدمين من بين نواحى ابر شهر فى الطبع و التادب حتى كان طبيبهم سرز و يه مقدما على سائر اطباً العجم و ملهنهم المعروف بالبازيد مقدم على سائر من ضلع الالحان و تعاطا الملاهى ثم هى من اطيب بلاد خراسان اطعمة اما خبزهم فليس بخراسان انظف خبزا و الذطعما منه حتى ان اليابس من فواكها من الزبيب و غير ذلك متصل على سائر الاماكن و انما يذكر من هراة اكثرة و انه يكثر فى الافاق فاما الطعم و الجودة فان المروزى بفضله و من صحة فواكههم ان البطيخ يقدد وتحمل الى العراق و لم اعلم هذا يمكن ببلد غيرة و بلدهم من النظافة و حسن الترصيف و تقسم الابنية و المحال فى خلال الانهار و الغروس و تمييز اهل كل سوق عن غيرة بحيث يفضل سائر مدن خراسان فى حسنه و فى مفازتها يكون الاسترغار الذى يحمل الى سائر الدنيا و يرتفع من مرو الابريشم و القز الكثير وبلغنى ان اصل الابريشم بجرجان و طبرستان انما نقل فى القديم من مرو و ربما حمل من يزر دود القز منها الى طبرستان ومنها يرتفع القطن الذى ينسب اليه القطن اللين و الثياب التى تجهز الى الافاق وبها مذابر قديمة و حديثة فبمرو منبران ويلثمهن منبر ونهر مرفوة منبر وسخ منبرو بحرنج منبرو بحرق منبرو بالسوسفان منبر فهذة مذابر مرو التى اعرفها *

اما هراة فانها اسم المدينة ولها اعمال ومن مدنها مالق و حسان واستربيدان و اوفه وماراباذ وباسان وكروج وحشب و باستراد ادرسلن وبواران وكوسندو خراسان و اسراد اسم الكورة لا اسم المدينة و مدنها هذة الاربعة التى ذكرناها و اما هراة فانها مدينة عليها سور وحواليها ماء و داخلها مدينة عامرة و لهارض و فى مدينتها قلعة ومسجد الجامع ودارالامارة خارج الحصن مكان تعرف بخراسان اباذ منقطع عن المدينة بينه و بين المدينة اقل من ثلث فرسخ على طريق سح على غربي هراة و بناؤها من طين و هى مقدار نصف فرسخ فى نحوة و لمدينتها الداخلة اربعة ابواب الباب الذى يخرج منه الى نيشاپور مما يلى الشمال يسمى باب سراى والباب الثانى الذى يخرج منه الى بلخ غربى يسمى باب سراى والباب الثالث الذى يخرج منه الى سجستان يسمي باب فيروز اباد و الباب الذى يخرج منه الى الغور شرقى يسمى باب حسك

وابوابها من خشب غير باب سراى فانه حديد وعلى كل باب سوق يشمل مما يليه من المحال وفى داخل المدينة والربض مياه جارية وللحصن اربعة ابواب بحذاء كل باب من ابواب المدينة باب لهذا الحصن ويسمى باسم ذلك الباب وخارج الحصن جدار يطوف بالحصن كله اطول من قامة وبينهما مقدار ثلثين خطوة والمسجد الجامع من المدينة فى وسطها وحواليها اسواق والسجن على ظهر قبلة مسجد الجامع وليس بخراسان وما وراء النهر وسجستان والجبال مسجد اعمر بالناس على دوام الايام من مسجد هراة ثم مسجد بلخ ثم مسجد سجستان فان بهذه المساجد حلق الفقهاى والناس يتزاحمون على رسم الشام والثغور وسائر المساجد بهذه الاماكن اينما ينتابها الناس فى الجمعات وهراة مطرح الحمولات من فارس الى خراسان وهى فرضة لخراسان وسجستان وفارس *

والجبل من هراة على نصف فرسخ على طريق بلخ ومحتطبهم من مفازة بينها وبين اسفزار وليس بهذا الجبل محتطب ولا مرعا وانما يرتفقون منه بالحجارة للارحنه والفرس وغير ذلك *

وعلى راس هذا الجبل بيت ناريسمى سرسك وهو معمور وبينها وبين المدينة كنيسة النصارى وليس بينها وبين المدينة مياه ولا بساتين الا نهر المدينة على باب المدينة يعبر بالقنطرة ثم لايكون بعده ماء ولا خضرة وعلى سائر الابواب مياه وبساتين اعمرها باب فيروز اباد ومخرج مائهم من قرب رباط كروان فاذا خرج عن الغور الى هراة ينشعب منه انهار فمنها نهر يسمى برجوى يسمى رساق سداسنك ونهر يسمى بارست سقى رساق كواسان وساوسان وما كن وميزان وروابر ونهر يسمى اذر بيجان يسقى رستاق سوسان ونهر يسمى سكوكان يسقى رستاق سله ونهر يسمى كراغ يسقى رستاق كوكان ونهر يسمى غوسمان يسقى رستاق كرك ونهر يسمى كفل يسقى رستاق عوبان وكربكرد ونهر يسمى فغو يسقى رستاق بغاوردان وفيرد ونهر يسمى الجيز يسقى مدينة هراة *

والبساتين متصلة على طريق سجستان مقدار مرحلة واكبر مدينة بهراة بعد هراة كروح واوفه ويرتفع من كروح الكشمش الذى يجلب الى الافاق والزبيب الطايفى الذى يحمل الى الافاق معظمه يرتفع من مالن وكروح مدينة صغيرة واهلها شراة ومسجد الجامع بمحلة منها يسمى بسيدان وبناؤها طين وهى فى شعب بين جبال وحدها مقدار فرسخ كلها مشتبكة البساتين والمياه

والاشجار والقرى العامرة و اوفه اهل جماعة وهى بحركروج ولها بساتين ومياه ربناؤها من طين وما بين اصغر من كروج وهى مشتبكة البساتين والمياه والكروم عامرة جدا وحسان قليلة الاشجار وهى اصغر من مالن واهلها اهل جماعة واسرمان اهلها الخوارج وهى اصغر من مالن ولها مياه وبساتينهم قليلة والغالب عليهم الزرع دون الكروم وهى فى الجبال وما را باد كثيرة البساتين والمياه وهى مدينة اصغر من مالن يرفع منها ارز كثير يجلب الى النواحى *

ونا سار مدينة اصغر من مالن ولهم زرع وهى قليلة البساتين على كثرة مياهها وباسفرار اربعة من المدن واكبرها كواسان وهى مدينة اصغر من كروج ولها ماء وبساتين كثيرة وكران وكوسك وادر *

سلر هى متقاربة فى الكبر ولها مياه وبساتين واسفرار مقدارها ثلث مراحل فى مرحلة وهى كلها عامرة ليس فى طهرانيها مفازة وباسفرار شعب يسمى كاشكان وفيها قرا عامرة كلهم شراة فاما مدن اسفرار فان اهلها اهل جماعة واما بوشنج فان بها من المدن حوكرد وفزكرد وكوس وكرة واكثرها بوشنج وهى مدينة نحوالنصف من هراة وهى وهراة فى مستو ومن بوشنج الى الجبل نحو فرسخين وهى هذا الجبل الذى من هراة اليه نصف فرسخ وبناؤه من جنس بناء هراة ولهم مياه واشجار كثيرة وبها من اشجار العرعرما ليس بجميع خراسان فى بلد ويحمل هذا الخشب الى سائر النواحى وماؤهم من نهر هراة وهو النهرلذى يخرج الى سرخس غير انه ينقطع الماء دون سرخس ويستعمل الا فى بعض السنة ولبوشنج سور وخندق وثلثة ابواب باب يسمى باب على نيسا بور وباب هراة الى هراة وباب قوهستان الى قوهستان واكبر المدن بها بعد بوشنج كوسرى وهى مدينة لها ماء وبساتين قليلة وهى نحوالثلث من بوشنج وبناؤها من طين وحوكرد لها ماء وبساتين كثيرة وهى اصغر من كوسرى وفركرد اصغر من حوكرد ولها ماء جار وهم اصحاب سوائم وليس لهم بساتين كثيرة ولهم ماء جار قليل وكرة لها بساتين ومياه كثيرة وهى نحو من فزكرد فى الكبر واما باذ غيس فان بها من مدنها جبل الفضة وكوه وكوعناباد وبست وجازو وبحايرون وكالوون ودهستان والسلطان يكون مقامه بكوعناباد واعمرها واكبرها دهستان ويكون نحوالنصف من قوشنج وبناؤها من طين

ولهم اسراب كثيرة فى الارض و هى على جبل و لهم ماء جار قليل وليست لهم بساتين ولا كروم و انما هى مناحس و كذلك كو وجبل الفضة و كو اكبر من جبل الفضة وجبل الفضة على جبل كان فيه معدن الفضة و تعطل لقناء الحطب *

و اما كرفانها فى صحرا و يلوغاناد و بست وحاذوى بساتين و مياه و لهم بساحس كثيرة وكالزون وكافورن ليس لهم بساتين ولا مياه جارية و انما مياههم من الامطار و الابار و هم اصحاب زروع مياحس اصحاب اغنام و جبل الفضة على طريق سرخس من هراة و ناد عبس اهل جماعة الاحسان و قربة احمد بن عبد الله فان اهلها شراة *

و اما كج رستاق فان مدينتها بين ولها كيف *

و بغ شور و السلطان منها بين وهى اكبر هذه المدن و بين اكبر من بوشيخ و بغشور نحو فرسخ فى الكبر *

و كيف نحو نصف بغشور و بين و كيف لهما مياه كثيرة جارية و بساتين و كروم و بناؤها من طين و اما بغشور فانها فى مفازة وهى عذى و زروعهم كلها مباخس ومأؤهم من الابار وهى اخصب زروع وهى مدن صحيحة التربة و الهواء و هذه المدن كلها على طريق من وروز و من وروز بها من المدن قصر احنف و درة من وروز و اكبرها من وروز وهى اصغر من بوشيخ و لها نهر كبير و هذا النهر الجارى من الى مرو ولهم عليه بساتين وكروم كثيرة وهى طيبة التربة و الهواء *

و قصر احنف على مرحلة منها على طريق بلخ و درة على طريق اسار على اربعة فراسخ وقصر احنف لهاماء جار و لها بساتين و كروم و فواكه حسنة و درة يشق نهر من و روز وسطها و هى نصفان و بينهما قنطرة و لها بساتين و كروم و فواكه حسنة و من مرورروز الى النهر غلوة *

و الطالقان مدينة نحو من مرورروز فى الكبر و لها مياه جارية وبساتين قليلة و بناؤها و بناء مرورروز من طين وهى اصح هواء من مرورروز من مرورروز الى الجبل ثلاثة فراسخ فمايلى المغرب و من جانب الجبل منه على فرسخين ممايلى المشرق *

و الطالقان فى جبل و لها رساتيق فى الجبل *

و القارنان مدينة اصغر من الطالقان الا انها اكثر بساتين و مياها من الطالقان و بناؤها من طين و الجور جان اسم للناحية و مدينتها اليهودية *

و شبورقان و انجدرستاق و مدينتها اسلح و كندرم و انبار رسار و اكدرها انبار و بها مقام السلطان و هى مدينة على الجبل و هى اكبر من مروروز و لها مياه و كروم و بساتين كثيرة و بناؤها طين *

و سان مدينة صغيرة لها مياه و بساتين و الغالب على ثمارها الجوز و هى فى الجبل و اليهودية اكبر من سان ولها مياه و بساتين وهى فى الجبل و كندرم فى الجبل و هى مدينة كثيرة الكروم و الجوز و لها مياه كثيرة *

و سورفان لها ماء جار و الغالب عليهم الزروع و بساتينهم قليلة و هى اكبر من كندرم و فرسان و هى نحو من اليهودية فى الكبر و سيرح مدينة و انجد مدينة صغيرة فى مفازة لها سبع قرا و بيوت لا اكراد اصحاب اغنام و ابل *

منها اسعرمدد و يرتفع من ناحية الجور جان الجلود التى تحمل الى سائر خراسان و هى عامة الخصب فمن سور فان الى انبار مرحلة فى ناحية الجنوب و من سور فان الى اليهودية يحتاج ان يرجع الى مارنان من حبس ثم منها الى اليهودية مرحلة و من سور فان الى انجد مرحلتان فى الشمال و من سور فان الى كندرم اربع مراحل ثلثة مراحل الى النهر و مرحلة اليها *

و عرج السار لها مدينتان احديهما تسمى بسير و الاخر اسورمين و هما متقاربتان فى الكبر و ليس بهما مقام للسلطان و السار الذى ينسب اليه المملكة مقيم بقرية فى الجبل تسمى بكذكان *

و هاتان المدينتان لهما مياه و بساتين و يرتفع من سير از كثير يحمل الى البلدان و يرتفع من سورمين زبيب كثير يسا قربه و بين سورمين دره مروروز مرحلة و المطاع و هو من نهر مروروز على غلوة عن شرقية و من سير الى سورمين مرحلة مما يلى الجنوب و هى فى الجبل *

و اما الغور فانها دار كفر و انما ذكرناه فى الاسلام لان به مسلمين و هى جبال عامرة ذات عيون و بساتين و انهار و هى خصبة منيعة و فى اوائلهم مما يلى المشرق قوم يظهرون الاسلام و ليسوا بالمسلمين و يحتف بالغور عمل هراة الى فره و من فره الى بلدى داور و من بلدى داور الى رباط كروان

من عمل ابن قريغون ومن رباط كروان الى حسان السار ومنها الى هراة فهذا الذى يطوف بالغور كلها مسلمون وانما ذكرناها لانها فى وسط الاسلام *

واما سرخس فانها مدينة بين نيشاپور ومرو وهى فى ارض سهلة وليس لها ماء جار الا فى بعض السنة ولا يدوم ماؤه وهو فضل مياه هراة وزروعهم مباخس وهى مدينة على نحو النصف من مرو وهى عامرة صحيحة التربة والغالب على نواحيها المراعى وهى قليلة القرا ومعظم املاكهم الجمال وهى مطرح لحمولات ما يحبط بها من مدن خراسان وماؤهم ابار وارحيتهم على الدواب وابنيتها طين *

واما نسا فانه اسم المدينة وهى خصبة كثيرة المياة والبساتين وهى فى الكبر نحو سرخس ولهم مياه جارية فى دورهم وسككهم نزهة جدا ولهم رساتيق واسعة خصبة وهى فى اضعاف الجبال *

وفراوة ثغر فى وجه البرية على الغزية وهى منقطعة عن القرا وفيها منبر يقيم بها المرابطون وهى عدد يسير الا انهم يرجعون الى عدة وافرة ينتا بها الناس وهى رباط اسمها فراوة ليس بها قرية ولا تتصل بها عمارة ولهم عين ماء تجرى للشرب فى وسط القرية وليست لهم بساتين ولا زروع الاميا قل على هذا الماء واهلها دون الف رجل *

وقوهستان من خراسان على مفازة فارس وليست بها مدينة بهذا الاسم وقصبتها قاين ولها من المدن ديناذ والطسين ويعرف بكر وكرند وحور وطبس ويعرف بطس مسارفا ما قاين فهى من الكبر نحو سرخس وبناؤها من طين وبها قهندر وعليه خندق ومسجد الجامع ودار الامارة فى القهندر وماؤهم من العين وبساتينهم قليلة وقراها متفرقة وهى من الصرود *

واما الطس فانها مدينة اصغر من قاين وهى من الجروم وبها نخيل وعليه حصن ولا قلعة لها وبناؤها طين وماؤها من القني ونخيلها اكبر من بساتين قاين *

واما جوز فانها اصغر من الطس وهى بقرب حوست وليس بحوست منبر وانما المنبر بجوار وبناؤها من طين وليس لها حصن ولا قلعة ولها بساتين قليلة وماؤهم من القنى وبها ضيق فى الماء واهلها اهل سوائم وهى على طرف المفازة وليس لهم بساتين *

واما ساند فانها اكبر من حوز وبناؤها من طين ولها قرا ورساتيق وماؤها من قني والطسن اكبر من ساند وماؤها من القني وبناؤها طين ولها حصن خراب وليس بها قلعه والنخيل بقوهستان بالطسن وسائر ما ذكرناه من الصرود وهذه المدن والقرا التي بقوهستان هي مشاهدة في اعراضها مفاوز وليس العمارة بقوهستان مشتبكة اشتباكها بسائر نواحي خراسان وفي اضعاف هذه المدن مفاوز يسكنها الاكراد واصحاب السوائم من الابل والغنم وفي حد قاين منها على يومين مما يلي نيشاپور هذا الطين الحامى الذي عمل الى الافاق لا اكل وليس بقوهستان فيما علمته نهر جار الا القني والابار ويرتفع منها شي من الكرابيس يحمل الى الافاق ومسوح وتحاخ وليس بها امتعة مرتفعة *

واما بلخ فان الذي يتصل به طخيرستان والختل تجهيز وبدخشان وعمل باسار وما يتصل بها فاما مدن طخيرستان فانها حلم وسمنجان وبغلان وسكلكند وورو اكبر وارهن وراون والطالقان وسكمست وورا وسراى عاصم وحسب انداراب ومدروكاه واما الختل فان مدنها هلاورد ولا وكند وهما مدينتا الوحش ولحاويل ويلتاب وهلتك وسلندره وقبل ومحاواغ *

وباورستان نيك وقد جعلت الجبل في ماوراء النهر واما عمل الخاميان وما يتصل بها فان مدنها البا منان ويسعورفندو سكاوند وكابل ولجوا وفروان وغزنه وتجهيز هي مدينة واحدة تسمى تجهيز وبدخشان اقليم له رساتيق ومدينتها بدخشان وهي مملكة ابى الفتح *

فاما بلخ فانها مدينة في مستو وبينها وبين اقرب الجبال اليها نحو اربعة فراسخ ويسمى جبل كرو عليها سور وعليها ربض ومسجد الجامع في المدينة في وسطها واسواقها حوالى المسجد الجامع بينها وبين مسجدها معمور بالناس على دوام الايام كلها وهي نحو من نصف فرسخ في مثله وبناؤها الطين وبها ابواب منها باب النوبهار وباب رخنه وباب حديد وباب الهندوان وباب اليهود وباب ست هن وباب لحير ولها نهر يسمى دها بين يجري في ربضها على باب النوبهار وهو نهر يدير عشرة ارحية ويسقى رساتيق الى سياه جرد ويجف بابوابها كلها البساتين والكروم وليس على سور المدينة خندق وسور من طين واما طخرستان فان اكبر مدينة بها الطالقان وهي مدينة في مستو وبينها وبين الجبل غلوة ولها نهر كبير وبساتين وكروم ومقدار

الطالقان نحوالثلث من بلخ ثم يليها فى الكبرو واكبر ويلى وروا كبر فى اكبر اندرانه و هى مدينة فى شعب جبال و بها تجمع الفضة التي تقع من حاربابه وتجهيزو بها نهران احدهما يسمى نهر اندراب و الاخر نهركاسار وبها كروم و اشجار كثيرة و جميع ما بقى من مدن طخرستان متقارب فى الكبر و هي كلها دون الطالقان وورو اكبرو اندرابه و هي ذات انهار و اشجار و زروع كثيرة عامرة خصبة و اما مدن الختل فانها كلها ذوات انهار و اشجار و هي على غاية و كلها في مستو الاسكرده فانها في جبال على ان الختل كلها جبال الا الوحس و اكبر مدينة بالختل ميل يليها هلتك و السلطان بهليل و الختل بين نهرو حساب و بين نهر و بدخشان و يسمى حريك و فى اضعافها انهار كثيرة يجتمع كلها قبل الترمذ بقرب القواربان فيصير كلها جيحون و ميل يكون نحوا من اندرابه و هليل اصغر منها وابنية هذه المدن من طين و سور ميل من جص و حجارة يليها من دور الكفر و حان و كران *

و بدخشان مدينة اصغر من ميل و لها رستاق كبيرة عامرة جدا خصب وبها كروم و انهار و هى على نهر حوبان من غربية و يكون بالختل دواب لذيذة تجلب الى الافاق و يرتفع من بلخشان النحازى و الارزورد و لها معادن فى الجبال و يقع اليها مسك من طريق دخان من تبت *

و اما تجهيز فانها مدينة على جبل يشتمل على نحو عشرة الاف رجل و الغالب على اهلها العيث و الفساد و لهم نهر و بساتين و ليست لهم مزارع *

و اما جاريانه فانها مدينة اصغر من تجهيز وكلا هما معدن الفضة و مقابر اهلها على تلك المعادن و ليس بجاريانه بساتين ولا زروع و يشق وسط المدينة نهر تجهيز و هو نهر تجهيز و جاريانه جميعا و ينتهى الى فروار حتى يقع فى ارض الهند و اما عمل الذا ميان فان اكبر مدنها الباسان و يكون نحوا من نصف بلخ و تنسب تلك المملكة الى شير باميان و ليس بها سورو هو على جبل و بين مدنها نهر كبير يقع الى غرجستان و فواكههم يجتلب اليهم و ليس بها بساتين و ليس بنواحى الباميان مدينة على جبل سوى الباميان و كلها ذوات انهار و اشجار و ثمار الاغزنه فانه لابساتين لها ولهانهر و ليس فى هذه المدن التى فى نواحى بلخ اكثر مالا و تجارة من غزنه فانها قرضة الهند و كابل لها قلعة حصينة و اليه طريق واحد و فيها المسلمون و لها ربض به

الكفار من الهنود و يزعمون ان الشاه لا تستحق الملك الابان يعقدله الملك بكابل و انكان منها على بعد ولا يستحقه حتى يصل اليه فيعقد الشاهية له هناك وهى قرضة الهند ايضا و يرتفع من بلخ الذوق من البخاتى المقدمة على سائر البخت بالنواحى و بها الا ترج و الذيلوفر و قصب السكر وما لايكون الا بالبلدان الحارة الا انه لا نخيل بها و يقع فيها و فى نواحيها الثلوج و لحرا وسكا وند و كابل حروم حارة غيرانه لانخيل بها *

و اما الغور فانها جبال محيط بها من كل جانب دار الاسلام و اهلها كفار الا نفر يسير مسلمون وهى جبال منيعة و لسا نهم غير لسان اهل خراسان و و جبالهم خصبة كثيرة الزروع و المواشى و المراعى وادخلناها فى جملة خراسان لان ثلاثة من حدودها يحيط بها خراسان و حدلها يلى نواحى سجستان و اكثر رقيق الغور يقع الى هراة و سجستان و نواحيها ويمتد من ظهر الغور جبال فى حد خراسان على حدود الباميان على التجهيز حتى يدخل بلاد وحار و يفترق فى ماوراء النهر الى داخل النزل على حدود لنار و السوس الى قرب خرخير و فى هذا الجبل من اوله الى اخره معادن الفضة والذهب و اعزرها ماقرب من بلاد خرخير حتى ينتهى الى ماوراء النهر من فرغانه و الشاش و اعزر هذه المعادن فى دار الاسلام فى ناحية تجهيز وما والاها *

و اما سواحل جيحون وخوارزم فانا نذكره فى صفة ماوراء النهر و اعمل وزم هما مدينتان متقاربتان فى الكبر على شط جيحون و لهما ماء جارو بساتين و زروع و اعمل مجمع طريق خراسان الى ماوراء النهر و خوارزم على الساحل و زم دون امل فى العمارة الا ان معبر ماوراء النهر الى خراسان و يحيط بهما جميعا مفازة تصل من حدود بلخ الى بحر خوارزم و الغالب على هذه المفازة الرمال و ليس بها عيون انهار الا ابار و سراع الى ان ينتهى الى طريق مرو على امل ثم يصير بينها و بين خوارزم و بلاد الغزنه مفاوز يقل ابارها و السوائم بها و اكثر السوائم بخراسان من الابل بناحية سرخس و بلخ فاما الغنم فان اكبرها يجلب اليهم من بلاد الغزنه و من الغور و الخلج و بخراسان من الدواب و الرقيق و الا طعمة و الملبوس و سائر ما يحتاج اليه ما يسعهم *

فمن اول عمل نيشاپور مما يلى قومس الى وادى جيحون على السمت

ثلاث وعشرون مرحلة من نيشاپور الى اسفراس و هو اخر عمل نيشاپور الى نيشاپور خمس مراحل و من نيشاپور الى نورجان اربع مراحل و من نورجان الى بوشينج اربع مراحل و من بوشينج الى هراة مرحلة و من هراة الى اسفرار ثلاث مراحل و من اسفرار الى درة و هو اخر عمل هراة مرحلتان و من درة الى سجستان سبعة ايام فمن اسفراس الى درة تسع عشرة مرحلة و من نيشاپور الى طوس ثلاث مراحل و من نيشاپور الى نساست مراحل و من نسا الى فراوة اربع مراحل و من نيشاپور الى قاين قصبة قوهستان نحو تسع مراحل و من قاين الى هراة نحو ثماني مراحل و من مرو الى مرو الرودست مراحل و من مرو الى هراة اثنتا عشرة مرحلة و من هرمز الى اسوردست مراحل و منها الى نسا اربع مراحل و قد ذكرنا ما بين مرو و امل و مرو و سرخس *

و من هراة على مرو الرود و هو طريق بلخ ست مراحل و من هراة الى سرخس خمس مراحل و قد ذكرنا الطريق من هراة الى نيشاپور و الى اخر حدها مما يلى سجستان و الى قصبة قوهستان و الطريق من بلخ الى مرو الرود اثنا عشر يوما و من بلخ الى شط الوادي طريق الترمذ يومان و من بلخ الى اندرا به تسع مراحل و من بلخ الى الباميان عشر مراحل و من الباميان الى غزنه نحو ثماني مراحل و من بلخ الى بدخشان نحو ثلث عشرة مرحلة و من بلخ الى شط الوادي على طريق الجبل بمكان يعرف بمثله ثلاث مراحل *

و اما عرض خراسان من بدخشان على بدخشان على شط وادي جيحون الى بحيرة خوارزم فمن بدخشان الى الترمذ على سمت النهر نحو ثلث عشرة مرحلة و من مدينة خوارزم الى بحيرة خوارزم ست مراحل قد ذكرنا المسافات التي بين المدن المشهورة بخراسان و سنذكر لكل مدينة مشهورة جوامع من المسافات بين المدن التي في عملها فاما نيشاپور فان منها الى نورجان اربع مراحل و من نورجان عن يسار الجائي من هراة الى نيشاپور على رحلة ما لن و يعرف بمالن لواخرر و ليس بمالن هراة و من مالن الى حوا عن مرحلة و من حوا من الى سكان يوم و من سكان الى ساند يومان و من ساند الى قاين يومان و سكومل اذا عدلت عن يسار سكان على يومين و من سكومل الى زوزن يوم و من زوزن الى قاين ثلثة ايام *

ومن نيشاپور الى برشير اربع مراحل ومن برشير الى كندر يوم ومن كندر الى ساند يومان ومن ساند الى قاين يومان *

ومن نيشاپور الى خسرو خرد اربع مراحل وسار وارمل خسرو وجود بنحو فرسخين ومن خسرو خرد الى بهمناباد مرحلة كثيرة ومن بهمناباد الى موربان على طريق قومس نحو فرسخ *

ومن نيشاپور الى خان روان مرحلة ومن خان روان الى مهرجان يومين ومن مهرجان الى اسفراس يومان واذا خرجت من بهمنا باد الى مهرجان فالى ازاز واريوم ومن ازاز وار الى ربوذه يوم ومن ربوذه الى مهرجان يومان *

واما مسافات مدن مرو فان من مرو الى كشيمهن منزل وهو مرفوع بحذاء كشيمهن على مقدار فرسخ عن يسارها وعليها طريق سكانة التي توزي الى خوارزم وباسان قبل مرمر مرفوع بفرسخ على طريقها وشيخ على مرحلة من المدينة فيما بين طريق سرخس وطريق مرو وحريم على ست فراسخ من المدينة قبل زرق بفرسخ على الوادي ومرورم على هذا الطريق على اربع فراسخ من مرو على الوادى والذيل افغان على مرحلة من مرو على طريق سرخس والفرس على اربع مراحل من مرو على وادي مرو وحرق على نحو ثلث فراسخ من المدينة بين طريق سرخس واسورد رسوسان على نسق حرف الا انه ابعد منها بنحو فرسخ *

واما مسافات مدن هراة وما يتصل بها من بوشيخ وبادغيس وكخرساق فان من هراة الى اسفرار ثلاث مراحل ومدن اسفرار هى اربعة سميناها وهى كلها في اقل من مرحلة ومن هراة وما لن هراة نصف يوم وبين هراة وكروح ثلاثة ايام وبين هراة وبوشيخ يوم وبين بوشيخ وكوه اربع فراسخ عن يسار الذاهب الى نيشاپور وبينها وبين الطريق نحو فرسخين ومن بوشيخ الى فركرده يومان ومن فركرده الى جوكرده يومان ومن جوكرده الى زوزن يوم ومن هراة الى باسان هراة نصف مرحلة ومن باسان الى حسيان مرحلة خفيفة ومن حسيان الى اسرسان مرحلة ومن اسرسان الى ماراباد مرحلة خفيفة ومن ماراباد الى اوفه مرحلة خفيفة ومن اوفه الى حسب يومان ويدخل من حسب في حد الغور ومن هراة الى بنه مرحلتان ومن بنه الى كيف مرحلة ومن كيف الى مغشور يوم *

BLACK ASIATIC LITHO. PRESS. CALCUTTA

و اما مسافات مدن بلخ فمن بلخ الى حلم يومان و من حلم الى ورو اكبر يومان و من ورو اكبر الى الطالقان يومان و من الطالقان الى بدخشان سبعة ايام و من حلم الى سمنخان يومان و من سمنخان الي اندرا به خمسة ايام و من اندرا به الي حاربانه ثلاث مراحل و من حاربانه الى تجهيز يوم و من عسكر تجهيز الى فروان مرحلتان *

ومن بلخ الى بغلان ست مراحل منها الي سمنخان اربع مراحل و الى بغلان مرحلتان و من بلخ الى مدرست مراحل و من مدر الى كه منزل و من كه الى الباميان ثلاث مراحل ومن بلخ الى اسورفان ثلاث مراحل ومن اسورفان الى الفارياب ثلاث مراحل و من الفارياب الى الطالقان ثلاث مراحل و من الطالقان الى مرو روز ثلاث مراحل و المسافة بين مدن قوهستان فمن قاين الى زوزن ثلاث مراحل و من قاين الى طبس مسان يومان و من قاين الى حور يوم و من حور الى حوست فرسخان و من قاين الى الطبسن ثلاث مراحل فقط

Note on the Sculpture in alto-relievo sent by the Governor-General to the Asiatic Society.—With a drawing. By Welby Jackson, *Esq. Vice-President, Asiatic Society.*

This plate represents a very curious piece of sculpture in high relief which was laid before the Asiatic Society by order of the Governor General; the size is 6 inches by 6½ inches; and the material, a dark Pot-Stone containing mica. The subject of the piece is a "Warrior King on horseback:" under the forefeet of his horse is apparently one of the conquered, holding and supporting the horse's forefeet in his hands: the horseman wears a close tunic with sleeves, and a scarf hangs loosely across him and over his left arm: his legs are covered with drapery which, from the position of the folds, seems to resemble the *dhoti* of India: he raises his right hand held open to a level with his head, the thumb upwards; an attitude common in ancient Bactrian coins, and in Greek and Etruscan figures: the horse is caparisoned, with a plume on his front, which seems to wave backwards as he advances; a circular disk behind the head of the horseman has the appearance of a shield;—and over his head is

a Chhattra or umbrella, the emblem of royalty in the east;—three attendants accompany him; one preceding him dressed in scale armour, which was common among the Persians, a kilt or continuation of the θωραξ or lorica in the Greek fashion, and a sword held under his left arm; he wears the same lower drapery, as the horseman: behind this foot soldier is another, whose action cannot be made out, though they both look towards the principal figure; another attendant behind seems to hold Chhattra over the horseman:—the whole is executed with much spirit and effect; the heads are of a Greek form, and resemble in character that represented in Plate 20, No. 230 of this Journal: the head-dress is precisely the same, as regards the horseman and the principal attendant who precedes him, that is, an ornamental cap, which allows the hair to appear in curls over the ears;—the heads of the other attendants differ slightly; and that of the figure under the horse's feet, is without covering; it has also a beard, while the other four have only moustaches. This relief is probably of the same period as the head represented in No. 230 of this Journal; and was found in the same vicinity; but this is a work chiselled in stone, while the other was merely of stucco. It is perhaps part of a long frieze representing a triumphal procession. On the upper part there is a projection by which it has been fastened into its place on a wall, and a similar projection, a tenon, has been broken off below.

There are several coins of Azes and Undopherres and other kings of the Arian and Bactrian races, bearing the representation of a horseman holding out the right hand in the position of the principal figure in this relief; which is no doubt intended to represent a victory or perhaps rather a conquest, as the vanquished is unarmed; and if so, probably there would be an inscription or some distinctive mark or monogram on some part of the building to which it belongs, indicative of the time and the king to whom it refers; it is a subject of the greatest interest, and well deserves the attention of those who have an opportunity of carefully examining the site where it was found and the vicinity of it: all the information hitherto obtained on this point is, that it was found near Kohat.

The first volume of the original text of Tabary.—*By* Dr. A. Sprenger.

In the library of the Asiatic Society of Bengal, No. 443 is an old MS. on the margin of the first page of which the words قطعة من تاريخ العلوى are written in an old hand, but not in the hand of the copyist, and it has consequently been entered in the Society's catalogue under this title. On examination it turns out to be a very considerable portion of the first volume of the original text of *T*abary. This is proved by the fact that Ibn *H*omayd is constantly quoted, as the informant of the author, and observations on the original traditions, which compose the body of the works, are in the fashion of *T*abary preceded by the words قال ابو جعفر ابن جرير الطبرى. To these words, the formula رحمه الله عليه are added, which might shake our faith in the identity of the work, but it is clear they are the additions of the pious copyist.

The volume is not only incomplete (there are six or fourteen leaves wanting in the commencement) but the book-binder has displaced the leaves. It is in small 4to., 216 pp. of 17 lines, written in a clear, old and correct hand. The contents do not appear sufficiently important to deserve more than a summary notice. The author treats of the creation, of time, of the eternity of God, of the first thing created, of the day on which the creation was begun, of the order in which day and night, sun and moon were created, of Iblys and the fallen angels, of the history of Adam. He gives a short account of Kayúmarth جيرمرث (the end of this Chapter is wanting, or displaced by the book-binder) the death of Adam, the history of Seth and his times, a few words on Tahmírath the successor of Hushang, Idrys, Noah and the flood, Bayúrásb that is to say al-Azdaháq الازدهاق, whom the Arabs call Dha*hh*áq, the history of Noah continued, the times from Noah to Abraham. This is the last chapter of the book. It would perhaps be worth while to extract from it the legends of the Persians contained in it.

A few Remarks on the subject of the Laterite found near Rangoon.—*By Capt.* C. B. Young. *Bengal Engineers.*

Sir,—I take the liberty of troubling you with a few remarks on the subject of the Laterite which abounds in the neighbourhood of Rangoon.

The hilly country of upper Ava ceases with the promontory of Kyouktaran near Lunzay below Prome, and from that to the sea, the Irrawaddy flows through a rich alluvial Delta.

Unlike that of the Ganges, however, this is varied by occasional rising eminences and ridges, and upon one of these the great Pagoda of Rangoon is situated, the platform of which is 160 feet above the river, the Pagoda itself rising 320 feet above that again.

These eminences are chiefly, if not entirely, composed of Laterite. The lower plain country consists of clay and sand; each occasionally predominating, and the former sometimes of a very rich aluminous kind like pipe-clay. (Vide specimens.) The surface soil is always clayey or alluvial, but in making cuttings, as in digging tanks or for roads, it is usual to find the soil at a small depth becoming gritty or gravelly. On examination, this is found to arise from numerous concretions, similar to kunkur, some of a brick-red, some of a black, colour. In some places the red predominate, in others the black, forming strata running in waving directions though the soil; and the colours are exhibited owing to the nodules being cut through by the tool in the act of digging.

The nodules themselves when picked out of the earth are aggregations of the local coloured clay, round nuclei of the black matter in the centre, and around that the redder material; both having strongly the appearance of owing their origin to an infusion of iron in the soil.

Deeper down the nodules speedily become more numerous, until at last the whole, from the nodules joining and adhering tolerably firmly together, leaving at the same time numerous interstices irregularly shaped between them, assumes the appearance of a nodular clay iron-stone, ætites, or, as it has been called, an iron bound breccia. In this shape it may be dug out and handled in lumps or masses, but these may be readily broken with the hammer, or even by hand. In a more advanced state, it becomes still more compact

and rock-like, tougher and heavier, and in short has all the characteristics and appearances of the more vesicular or spongiform species of Laterite. In other places and under other circumstances, its structure becomes more uniform and compact, and of this kind is that of the hill on which the Rangoon Great Pagoda itself stands, and that from Bassein, where also it appears to be generally redder in colour.

Specimens of all these, I have the pleasure to send you. Under all these forms, as may be imagined, this stone is very useful. In its early nodular state, it is thrown out together with the clay of the bed or matrix in which it is found, on to the surface of our roads, and when the latter is washed away by the rains, the nodules remain like kunkur, forming an excellent firm road. In its more advanced and perfect form, it is quarried in blocks, and hardening with the characteristic quality of Laterite, it is used as in the flight of steps to the Great Pagoda, where, although frequently more than usually spongiform, it withstands admirably the unceasing tread of thousands passing over it.

It must no doubt have been among the specimens sent home by Mr. Crawford in 1826, and is, I suppose, that which is called by Dr. Buckland in his most interesting paper on Mr. Crawford's Fossils and specimens, breccia; as he writes of this, that it is cemented sometimes by carbonate of lime, sometimes by hydrate of iron, and "where this iron is very abundant, it affords concentric ochreous concretions resembling ætites, dispersed irregularly through the breccia."

Although the stone certainly gains greatly in weight in its progressive states and also in hardness, yet this latter quality appears to arise almost wholly from exposure to the air; and its intrinsic toughness is by no means, that which an ore of iron should have. Nor does it affect the magnetic needle in any way after exposure to the blowpipe.

Its specific gravity, taking pieces of medium formation, and the mean of three experiments, gives 2.858, which is not great.

The red and black small masses or concretions are, at all times readily scratched with the nail. It cannot be called ætites; there are no looser particles in it: and scarcely with truth I think breccia, for that is a compound stone, consisting of agglutinated fragments.

The fragments of this are neither, irregular masses of *two or more minerals* intimately blended, nor, secondly, are they fragments of *pre-existing rocks* united by a cement. These are generally considered, as the only two classes, I believe, of breccias.

Analyses of the various parts of this rock and of the soils about it, give the following results.

The aluminous soil generally contains 50 per cent. of clay, the richer kinds as much as 65 to 70.

A detailed analysis of specimens of the rock made by Captain James. 32nd N. I.* of the Museum of Economic Geology gives the following result.

Mean Result of three Analyses of Laterite from Burmah.

Soluble in Acids.	
Peroxide of Iron,	46.279
Alumina,	5.783
Lime,	.742
Magnesia,	.090
Silica,	.120
Insoluble in Acids.	
Silica (dissolved by Potash,)	6.728
Silica (by fusion,)	30.728
Lime, Iron and Alumina,	2.728
Combined Water Alkalies and Loss,	6.802
	100.000

* The following is an extract from Capt. James' letter :—

"I send you an analysis of the Laterite which I have made very carefully.

"It is the mean result of three analyses, all of which came within a fraction one of the other. You will perceive by the quantity of iron it contains, that it would be well worth smelting if coal and limestone could be obtained in its vicinity.

"It yields about 32 per cent. of metallic iron, and I shall smelt a small piece I have remaining to see what quality of iron it is.

"The quality of hardening by exposure which the laterite possesses, is doubtless due to the silica which exists in a soluble state by potash, and to which the same property is due in all hydraulic limes. Iron also when it exists in such quantities has the power of hardening.

"I have shown the analysis to Sir Henry de la Becke who considers it very interesting, and I think I shall publish it in the Chemical Journal.

"Water also exists in it chemically combined, and which I was unable to drive off at 212°. This would also assist it in hardening.

"I have been assisted in my analysis by an assistant of Lyon Playfair's who is a very clever chemist, so you may depend upon the result being quite correct.

"I have sent the analysis of the laterite to Col. Sykes, requesting him to let me have one that was made for him some time ago."

The analysis of a proportion of a black stratum in its neighbourhood bearing quite the appearance of a carbonaceous or vegetable mould, gave moisture 13.3 in 100 parts, and on being calcined to a red heat, animal or organic matter 1.6 only, the remainder having the colour and appearance of powdered brick.

Particles taken carefully out, having more than usual the appearance of concretions of lime, gave however on trial with sulphuric-acid no indication of it.

From the foregoing, this rock appears to be chiefly silica and iron bound together, by some agent acting chemically on it, although at the same time, there can be no doubt that the clay of the rich aluminous soil, in which it rests and is formed, is in some way necessary to the process. In some of the rising grounds near the Rangoon stockade, I have found a plain soft clay-slate which gathering the ochreous tint or infusion, seems to swell into lumps or small masses, and from that to pass into the regular concretionary or gravelly form in which I have described the stone itself as being found in its first stages, and which we use for roads, and in this pebbly form it may be found covering the surface of most of the hillocks and mounds about Rangoon. What the infused agent may be I am unable at present with my imperfect means to ascertain. If this rock be then, as it has all the appearance of being, true laterite, we have it here forming under our feet, and laterite cannot be supposed to be igneous, but is evidently, like other rocks which have been erroneously attributed to volcanic sources, of chemical origin.

I have found in it myself small shells, but no sufficiently decided specimen as yet to pronounce confidently on, and the superintending Surgeon here informed me that he had seen at Moulmain, in the side of an excavation for a dry dock, pieces of pottery imbedded in it. Quartz and other pebbles are common in it. It may be perhaps that as the flints in chalk and our kunkur are nodular formations of silica and of lime, so this represents a similar nucleous concretionary form of a richly aluminous soil, and that flints, kunkur and laterite are the results of a similar chemical process acting respectively upon calcareo-silicious, silicio-calcareous and alumino-silicious earths.

Specimens of rocks of various kinds are found at Rangoon, but the only one in situ is the plastic clay-like pipe-clay which occurs to the

north of the pagoda mixed with strata of a rough silicious sand, inclined at an angle of 15° to the N. E.

Marble and alabaster from the Ava (Sagaing) quarries are plentiful, the former, which Chantrey pronounced to be equal to the finest Carrara, particularly so; the latter which is equally beautiful and pure, is less plentiful.

Limestone is not found nearer to Rangoon than the Martaban district, and the mountains in the neighbourhood of Pegu whence it is imported, and used in great quantities for the temples. It is also found about Prome.

From the same part of the country (Prome) come a variety of sandstones which are used for domestic purposes by the Burmese. Some are freestones of a fine clear even colour and very easily cut.

I have also found boulder specimens of travertine and a roofing clay-slate, but whether these will be found hereafter up the country or not, I cannot say.

One specimen only but a good one of petrified wood has been found. It was presented by Major Fraser to the Governor-General. Doubtless we shall find more of these hereafter.

Chlorite used as slate-pencil by the Burmese is found near Prome.

A handsome syenite also occurs, which will, I believe, be met with near Ava; and what appears to be a decomposed granite which comes, I am told, from Shoegeen and Lao country. This I have found but one specimen of. It contains much felspar and at one time I thought I detected grains of gold in it, which seemed a not improbable occurrence.

I have little doubt that when we get better acquainted with the northern districts, coal which belongs to the formation will be found, and added to the already large mineral wealth of the country, which including Lao and the Tenasserim provinces, supplies gold, silver, rubies, sapphires, copper, zinc, tin, lead, iron, petroleum, antimony, marble, alabaster, &c. &c. If to these be added its teak, cotton and indigo, it should, with the aid of such a water carriage be a profitable and valuable acquisition to the Indian empire.

I remain,

Yours very faithfully,

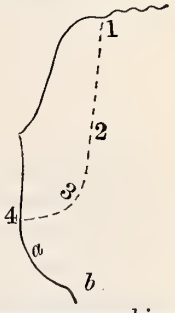
C. B. Young,

Rangoon, September 10*th*, 1852. *Captain, Bengal Engineers.*

List of Specimens of soils from Rangoon.

Nos. 1, 2, 3, and 4. Specimens of Laterite taken from a quarry or ditch excavation at the S. E. corner of the stockade, as numbered in the section, No. 1 being the surface soil, and No. 4 the exterior surface of the excavation hardened by exposure.

Section of Quarry.



I observed at this quarry that under a projection (a) where much moisture must have collected and but little sun reached (as b) the surface was much less hard than at (a) where it was perfectly rock-like, and could be cut to quite a smooth face if wished.

No. 5. Laterite specimens from other spots about Rangoon with pebbles, &c. imbedded.

6. Ditto ditto.

7. A smoother and more even textured specimen, approaching sandstone. Taken from a block, said to be similar to that on which the Great Pagoda is situated.

8. Nodules picked from the gravelly soil.

9. Earth from a black stratum in the neighbourhood of the same gravelly soil.

10. Gritty sand from near Scotch Tank, in which plastic clay occurs.

11. Lump or nodule of plastic clay.

12. Part of a thin stratum of ditto. These can be, and are used as chalk, although steatite is preferred by the Burmans for writing with, on prepared black tablets.

13. Disintegrated granite (?) with much felspar—said to come from near Shoe-geen on the Sitang river.

14. Syenite, found near Ava I am told.

PROCEEDINGS

OF THE

ASIATIC SOCIETY OF BENGAL,

For February, 1853.

At a meeting of the Society held on the 2nd instant at the usual hour and place

Sir James Colvile, Kt., President, in the Chair.

The following gentlemen were introduced as visitors:—

Captain Crawford, R. N. } by the President.
Mr. Hillersdon, B. C. S. }

Captain Brereton, by Major Kittoe.

Bábu Rádhánáth Sikdár, by Captain Thuillier.

The following presents were laid on the table:—

1st. From Professor Oldham. A Sonthal drum, and two boxes of geological specimens from Cherra Punjee and its neighbourhood.

2nd. From Capt. C. B. Young. Specimens of shells, coprolites, &c., imbedded in the calcareous sandstone formation in the neighbourhood of Prome.

Ditto of fossils from Rangoon.

16 Burman MSS.

3rd. From C. Gubbins, Esq. 6 Hindu copper coins from near Mahábálipuram.

4th. From Dr. Campbell, through Captain Sherwill. Skin of a female Shou Deer.

5th. From Fred. Gubbins, Esq., Collector of Benares, through Col. Forbes, Mint Master. 68 old silver coins. "These coins," says Mr. G. "are of the reign of Shah Jehan and other Delhi Emperors; three of them are Noor-Jehanny."

6th. From Captain Layard in his own name and in that of Mr. C. T. Carnac. Four small gold coins found under the old temple of

Tribeni at Ghorabad. Some black sculptured stones from these ruins, were sent to the Society last year, by Mr. D. Money, and Captain L. offers to try and procure some of them if the Society wish it: some of them bear inscriptions.

7th. From the Academy of Sciences, Belles Lettres and Arts of Bordeaux, through Captain Bolibo. Transactions of the Academy, Parts 2, 3 and 4 of 1851.

E. Thomas, Esq., C. S. was named for re-election by Mr. Grote, seconded by Dr. Falconer.

Read a letter from Lieut. Faithfull, wishing to withdraw his name from the list of members of the Society.

The President called the attention of the meeting to an interesting piece of sculpture kindly placed at his disposal, for exhibition to the Society, by Lord Dalhousie, together with a drawing of the same, by Welby Jackson, Esq.

With reference to a proposal of Dr. Röer, the Council recommended that the Sáririka Sutras of Vyása be published in the Bibliotheca Indica, and that the publication of the Sañkhya Pravachana Bháshya, on the terms proposed by Mr. Hall and Dr. Ballantyne, be also undertaken.

Resolved that the recommendation of the Council be adopted.

The Council reported their having formed the following sub-Committees.

Sub-Committee of Finance.

C. Allen, Esq. and Dr. Falconer.

Sub-Committee of Oriental Philology.

J. R. Colvin, Esq., Welby Jackson, Esq., Major J. S. Banks, Rev. W. Kay, Dr. E. Röer and Rev. J. Long.

Sub-Committee of Natural History.

H. Walker Esq., Major W. E. Baker, and Dr. Falconer.

Sub-Committee of Library and Journal.

J. R. Colvin, Esq., Captain Thuillier, H. Walker Esq., Rev. W. Kay, and H. Woodrow, Esq.

They further reported the removal from the list of members of the name of Mr. C. T. Watkins under Rule 13.

The following communications were read—

From Major Anderson, enclosing an English translation of Ibn Huokul's account of Khorasan.

From W. Muir, Esq., forwarding a Meteorological Register kept at the Secretariat office at Agra, for the month of December, 1852.

From L. Bowring, Esq., sending a fac-simile of a Sanscrita Inscription, found near Thánesar.

The following is Mr. B.'s account of the way in which he discovered the inscription.

"I have the pleasure to send you a copy of an inscription which I saw recently on a tablet of red sandstone in the temple of a follower of the Goraknáth persuasion, in the town of Pehewa, which is about 15 miles west of Thánesar. I was marching from Patiala toward Thanesar, and halted at Pehewa which is on the banks of the Saraswati river and is a place of pilgrimage of some note, having been formerly known under the name of Prithúdak. It is included in the limit of the sacred territory known as the 40 kos, that is, the distance between certain places, or the four points of the compass, within which the skirmishes of the Pándavas were carried on. The inscription was copied after my departure by the Thánádár of Pehewa, and is, as you will observe, reversed. I am not sure whether it will prove to be legible, as a part of the inscription is effaced. It is possible, however, that there may be interesting matter in it.

"I am not aware whether the Society has ever been furnished with an account of Thánesar, which bears marks of great antiquity, and is considered particularly sacred on account of the celebrated tank of Kurukshetra. I obtained an interesting notice of it from one of the Brahmans of the place.

"The old town of Samana, of which the ruins are very extensive, is another very remarkable spot, in which many coins and traces of ancient buildings are found. It is about 30 miles W. N. W. of Pehewa, and in the Patiala territory."

From E. C. Bayley, Esq., announcing that he has heard of an ancient inscription at a place called Khunniarah, and is trying to get a fac-simile of the same for the Society. With reference to the paper on the Kotuch Kings of Kangra, which he alluded to in a former letter, he states—

"I am working at the Kotuch Kings, but find the Bansávalis so manifestly fictitious, or at least so incorrect, that it will take me much time and trouble to reconcile discrepancies; meanwhile, I have from coins the following names, Rupchand, Prithichand, Harichand, Sringarchand, Trilokchand, Avatárchand, and at least two others not yet quite decyphered.

"I am not quite certain yet as to their actual period, but they range from 1100 to 1400 or 1450, A. D. I think;—probably from 1200 or 1250 to 1400.

"From Dhurmchand, who was contemporary with Akbar, the native histories are pretty accurate and detailed, but they admit every thing earlier to be uncertain. Even the present representative of the Kotuch race told me, I probably knew more than he did, but pointed out one old purohit who, he thought, might know something if he could be persuaded to shew his documents.

"The history of the Pathania Rajpoot, the family of the Noorpoor Rajahs, is also curious, and I will endeavour a sketch of it with that of the Kotuches. They claim descent from the old Tuars of Delhi, and are said to have got their present appellation because three of their kings in succession were employed by the Mogul emperors in subduing the "Pathans" of Affghanistan. Of one of these I have contemporary Hindu history. By the way, his death is said to have given rise to the name of the 'Hindu kosh.' I don't know if the story has been published before; if not, it may be worth the Society's notice.

"It is said this Rajah was ordered to march in winter by some very dangerous pass in the range to effect a surprise of some enemy on the other side.

"On entering the pass with his army (of his own Rajpoot clans) he was told that there is such danger of avalanches, that it was absolutely necessary to enjoin strict silence throughout his ranks.

"He is said to have replied to the effect that he was a Rajpoot and himself a deöta, and would shew fear of neither man nor spirit, and so far from enjoining silence on his men, directed that they should march with every trumpet sounding and every drum beating.

"They proceeded accordingly, and as the sun rose the avalanches descended, and overwhelmed the Rajah and five thousand of his devoted host.

"From this the pass originally, and subsequently the range, is reported to have received the name of 'Hiudu kosh,' the Hindu slayer: as good a derivation at least as any I have heard before."

From Captain Layard, forwarding a notice of an ancient city Kurnsouapuri, now called Rángámáti. The notice merely gives the traditions handed down regarding this city.

The Curator of the Museum of Economic Geology and the Librarian submitted their usual monthly reports; the former also read a supplementary note on the new Mineral Resin Hircine.

On the termination of the proceedings of the evening, Major Kittoe delivered a lecture on the antiquities of Sarnath, and exhibited a series of drawings of ancient sculptures from that neighbourhood and from other parts of the Benares and Behar districts.

The President in the name of the Society thanked Major Kittoe for his highly interesting lecture, when the meeting adjourned.

Read and confirmed, *March 2nd*, 1853.

(Signed) J. W. Colvile.

Report by the Curator of the Museum, Economic Geology.

Minerological and Geological. Our Secretary has sent me for examination some specimens mostly of laterite and lateritous clays and conglomerates, from Rangoon, forwarded by Captain C. B. Young, B. E. My catalogue of them is as follows.

Specimens of *Soils, &c.* from Rangoon.

Nos. 1, 2, 3, and 4. Lateritous clay, probably the *debris* of laterite becoming again consistent by the solution of the ferruginous part.

5 and 6. There is but one piece of these specimens, which I should allow to be true laterite, and this I find to contain

Peroxide of Iron,	47.50
Siliceous and Aluminous residuum,	52.50
No trace of Manganese or Lime,	100.00

The other specimens of these two numbers are clearly the *debris* of laterite cohering again as above, and in this case becoming conglomerates by the mixture of quartzose pebbles; they should be styled lateritous conglomerates.

7. Coarse-grained, highly ferruginous, sandstone; almost a siliceous iron ore in appearance.

8. Ferruginous nodules probably from the laterite.

9. Dark earthy soil coloured by a mixture of deutoxide and peroxide of iron.

10. Sandstone grit coloured by iron.

11. Plastic clay, contains protoxide of iron.

12. Same as No. 11 in thin laminæ.

13. A coarse-grained pegmatite, (i. e. quartz and felspar) decomposing.

N. B. There is a very singular-looking cellular, brittle, black substance in very small quantity adhering firmly to the outer part of this specimen. There is too little of it to sacrifice except for minute assays: I should like to have more of this.

14. Granite and not a Syenite: the black mineral being black mica and not hornblende; there is, however, embedded in this specimen some minute nests of Actinolite or pumice. They are too small to admit of examination, but I should like to have a larger specimen or two of this granite if procurable.

Museum of Economic Geology.

I received from Major Baker, with the following, the specimen of iron ore now on the table to which it alludes.

September 20th, 1852.

H. Piddington, Esq.

My dear Sir,—May I request the favour of your furnishing me at your convenience with an analysis of the accompanying specimen of ore, and with your opinion of its economical value under the following circumstances. The deposit of which this is a specimen is from the Hill of Karana, about ten miles from Lahore and not far removed from extensive jungle of firewood; coal in limited quantities is believed to exist in two localities of which one is hundred miles, and the other fifty miles distant from the site of the ore. Will you do me the favour to return the specimens when you have taken off what you require for the purpose of analysis.

Your's faithfully,

(Signed) W. E. Baker.

And having sent him an analysis and reply to his queries. I have subsequently received the following memorandum, by Mr. Purdon, from Colonel Napier.

Memorandum to accompany some specimens of iron ore forwarded to Lieut.-Col. R. Napier, Civil Engineer, Punjab.

About the centre of the Siteh Chuj Doab, twenty-three miles South-East of Shahpore, rise abruptly a number of conical-shaped knolls; the highest, and principal, called Karana, attains an elevation of about 1200 feet above the plain. This hill occupies an area from West to East in

length about three miles, in breadth scarcely one. None of the other knolls are near so extensive, nor do they attain one half the height. The dip of Karana is North to North-West, under an angle of about 35°, that of the salt range being about 15° locally higher,* the strike of both is the same, the distance between forty miles.

The rock of which these knolls are composed is a compact schistose sandstone, passing into clay-slate or argillaceous schist, of a varying yellowish leaden colour, it has somewhat the appearance of Grauwacke, and bears occasional marks.*

The Hill is intersected by veins of Quartz with Iron ore (Hæmatite), the thickness of the vein seldom exceeds six inches of which about 2½ inches are iron ore.

Without a thorough examination of the Hill, it is not possible to state in what quantity the ore occurs, though it appears abundant.

It is difficult to determine at present, the exact age of this formation, whether it belongs to the old red or a still more ancient group, but, that it is of older date than the rocks of the salt-range there can be little doubt, as in this latter no rock of a metamorphic character is found.

Pind Dadun Khan, (Signed) W. Purdon,
The 11th Nov. 1852. *On special Duty.*

(True Copy.)
(Signed.) T. G. Glover, *Lt., Engr.*
Assistant to the Civil Engineer.

The following is my report on this remarkable ore and my replies to his queries, sent to Major Baker for transmission to Col. Napier.

To Major Baker, B. E.

Dear Sir,—I have carefully examined the Iron ore from Karana accompanying your letter of 20th September. Indisposition has prevented my completing my analysis of it so perfectly as I could desire, and this and your early departure prevents me from being quite so precise as to the minor constituents as I could have wished.

Its composition in 100 parts taken as fairly as possible from the specimen of ore, to avoid the quartz with which it is mixed, I find to be as follows:

Water and Carb. Acid, ...	3.50
Silex, ...	11.22
Alumina, ...	none
Magnesia, ...	0.50
Carbonate of Lime, ...	65.14

* So in MSS. H. P.

Iron Peroxide, ...	21.85	19.66	Metallic Iron. 15.29.
Or Protoxide, ...			
Manganese (?)		0.10	
		100.12	

You will thus perceive that this ore is a remarkable instance of what is termed in Minerology Isomorphism; i. e. an ore with all the appearances of one kind of Mineral (in this case of a rich carbonate of iron) but in which it is found upon analysis that one of the constituents has been partly or wholly replaced by some other mineral. The proportions of iron and lime here are exactly changed, i. e. we should look to find the main ingredient to be about the 65 per cent. of protoxide of iron, instead of that amount of lime which now takes its place, leaving us 20 per cent. of protoxide of iron representing 15.3 per cent. of Metallic iron only!

The ore then proves to be almost a ferruginous carbonate of lime, but as it is only a surface specimen, one part being evidently weathered, it may become richer at a moderate depth, if a vein, or in a lower bed, if in beds; for this, the first question as to iron ores in a mining point of view, is not stated.

As to its produce; at present it is clearly too poor an ore to be smelted, though it would probably yield iron of the very finest description but if a richer ore is found near the spot, it will then be of great value to smelt with it, the lime and the small portion of Magnesia being the best fluxes and the Manganese improving the quality of the produce.

With regard to the yield of any Indian iron ore the first question is always, "What is to be the process and furnace adopted? and who are to be the workmen?" for from the complex and expensive English blast works, to the plain but simple Catalan and French Pyrannean forges, which produce some of the finest iron and steel in the world with the simplest means, every thing depends, as you know, on the furnace and the workman. If Major Napier sends us a promising ore he will perhaps also say by what process he thinks of working it.

I return your specimen as you desire, but it would be an acquisition for the Museum.*

H. Piddington,

Museum, 26th October, 1852. *Cur. Mus. Eco. Geology.*

I have received from Captain Ramsay, Acting Resident at Nepaul, a small collection of the woods of Nepaul, presented by General Jung Bahadur, who has also sent a large collection (96 specimens) of rocks and minerals

* Major Baker has presented it to the Museum.

which will be farther noticed when examined. I may mention here however that there is certainly one new metalic mineral amongst them.

From Dr. Martin of the Eye Infirmary, we have received three very fine specimens of marble and magnesian limestone from Assam, but the locality is not given.

I have embodied in a supplementary notice to my paper on *Hireine* a very interesting account of that substance from the Rev. Mr. Dawson of Rangoon, which, as will be seen, proves my conjecture, that it was a mineral resin, to be correct, and it is certainly a new one.

Library.

The following books have been added to the Library since December last.

Presented.

Anglo-Burmese Hand-Book, or Guide to a practical knowledge of the Burmese language, compiled by Dormor Augustus Chase. Maulmein, 1852.—By the Author.

Selections from the Records of the Bengal Government. No. IX. Report on the Teak Forests of the Tenasserim Provinces. By H. Falconer, M. D. (3 copies).—By the Government of Bengal.

Recueil des Actes de l'Academie des Sciences, Belles Lettres et Arts de Bordeaux, Parts II. III. and IV. of 1851.—By the Academy.

Bulletin de la Société de Geographie, Tome III.—By the Society.

Vergleichende Grammatik des Sanskrit, Zend, Griechischen, Lateinischen, Lithuanischen, Altolowischen, Gothischen und Deutschen, von F. Bopp. Sechste Abtheilung, Berlin, 1852, 8vo.—By the Author.

Transactions of the Royal Society of Edinburgh, Vol. XX. Part III.—By the Society.

Proceedings of the Royal Society of Edinburgh, Sessions 1851-2.—By the same.

Quarterly Journal of the Geological Society, No. 32.—By the Society.

Notes Introductory to Sassanian Mint Monograms and Gems. By Edward Thomas, Esq. (Extract from the Journal of the Rl. As. Soc.) London 1852.—By the Author.

Notice of certain unpublished coins of the Sassanidæ.—By E. Thomas, Esq.

Full Exposure of Dr. Chas. T. Jackson's Pretensions to the Invention of the American Electro-Magnetic Telegraph. By Hon. A. Kendall.—Washington 52 pp. 8vo.—By the Author.

Report of the Hospital at Ningpo for 1852, under the Medical Missionary Society in China, by D. J. MacGowan, Esq. M. D. Canton, 1852. Pamphlet.—By the author.

The Bibidhártha Sangraha No. 13.—By the Editor.

The Tátťwábodhiní Patriká, Nos. 113,114.—By the Tattwabodhini' Sabha',

The Missionary, Nos. I.—II. of 53.—By the Editor.

The Upadeshak, Nos. 72—74.—By the same.

The Calcutta Christian Observer, for Dec. 1852, and Jan. and Feb. 1853.—By the Editors.

The Oriental Baptist, Nos. 72—74.—By the Editor.

The Oriental Christian Spectator, Nos. for Nov. and Dec. 1852.—By the same.

Exchanged.

The London, Edinburgh and Dublin Philosophical Journal, Nos. 25,26.

The Athenæum, for September and October, 1853.

Purchased.

The Annals and Magazines of Natural History, for Nov. 1852.

Comptes Rendus, Nos. 11 to 18.

February 2nd, 1853. Ra'jendrala'l Mittra.

For March, 1853.

The Society met on the 2nd instant at the usual hour and place.

Sir James Colvile, Kt. President, in the Chair.

The following gentlemen were introduced as visitors.

G. Batten, Esq. C. S. by Mr. C. Allen.

J. Maltby, Esq. by Mr. H. Woodrow.

The minutes of the last month's proceedings were read and confirmed.

The following presents were laid on the table:—

1st. From Dadoba Pandurang, Esq. of Ahmednagur. A copy of the 2nd edition of his Mahratta Grammar.

2nd. From J. W. Sherer, Esq. Assistant Secretary to the Government of the N. W. Provinces. Selections from Public Correspondence, Parts III. to XII.

(The letter intimates that the future Nos. will be regularly supplied as they issue.)

Shakespear's Statistical Memoirs.
Montgomery's Statistics of Cawnpore.
Fraser's do. Gourgaon.
Kinlock's do. Futtehpore.
Batten's do. Almorah.
Educational Memoirs of the N. W. P.
Reid's Report on Indigenous Education.

3rd. From Captain Haughton, Singbhoom. Geological Specimens collected by himself and Mr. Campbell in the South Western Frontier of Bengal.

4th. From Lieut.-Col. R. J. H. Birch, Officiating Secretary to the Government of India in the Military Department. 3 Sheets of the Indian Atlas.

5th. From Dr. Gerhard von dem Busch. His translations of the following Swedish Medical Treatises.

Ueber die Bright'sche Nierenkrankheit. Eine Akademische Abhandlung von Peter H. Malmsten.

Ueber die Schwämmchen bei Kindern von Dr. F. Th. Berg.

Chronische Alkoholskrankeit oder Alcoholismus chronicus, Dr. Magnus Huss.

E. Thomas, Esq. duly proposed and seconded at the last meeting, was balloted for, and re-elected an ordinary member.

The following gentlemen were named for ballot at the next meeting.

Bábu Rádhánáth Sikdár, proposed by Sir James Colvile, and seconded by Captain Thuillier.

Dr. Macrae, (for re-election) proposed by Mr. Grote, and seconded by Dr. Walker.

J. E. Medlicott, Esq. Assistant Geological Survey of India, proposed by Dr. Falconer and seconded by Professor Oldham.

The Council submitted the following reports.

1st. Recommending at the suggestion of the Philological Committee that the Bháshya Ratna Prabhá of Govindánanda be included in the Society's edition of the Vedánta Sutras.

2nd. Recommending that the sum of Rs. 800 (chargeable to the Oriental Fund), be placed at their disposal, to provide glazed-cases for the Oriental MSS. in the Society's Library.

3rd. Proposing for election at the next meeting as an Honorary

member of the Society, Lieut.-Col. H. C. Rawlinson, C. B. of the Hon'ble East India Company's Bombay Service.

Their report briefly noticed the eminent services rendered by Col. Rawlinson to Oriental Archæology.

The several recommendations, on being put to the meeting by the President, were unanimously adopted.

Read letters—

1st. From L. Bowring, Esq., enclosing a Vocabulary of the Cashmiri language.

Referred to the Journal Committee.

2nd. From Professor Fleischer, acknowledging the receipt of the Society's Journal, No. III.

3rd. From W. Muir, Esq. Secretary, Government N. W. Provinces, forwarding Meteorological Registers kept at the Secretariat Office, Agra, for the month of December 1852, and January 1853.

4th. From M. P. Edgeworth, Esq. of Mooltan, forwarding a paper being an abstract of some curious Journals of a Mr. Gardener, an adventurer in the Punjab, who has travelled much in Central Asia.

The following is an abstract from his letter:

"How far we can implicitly rely on the correctness of his descriptions, I am not prepared to say; but there is a connectedness in his original Journals which makes me think that the main facts are correct. The traditions are doubtless as he heard them, and very curious from the jumble of old paganism and names from the Koran. I have given a slight sketch of his previous wanderings as he informed me, an abstract of his Journal, a more detailed extract of one passage, and his geographical notes, &c. with a rude map traced from his own sketch."

Referred to the Journal Committee.

5th. From C. Allen, Esq., Officiating Secretary to the Government of India, forwarding a report on the geological structure and mineral wealth of the Salt Range in the Punjab, with maps, sections, &c. by Dr. A. Fleming.

6th. From L. Bowring, Esq. promising to send a more accurate copy of the Inscription lately sent by him from Thâneswar.

The following is an extract from his letter.

"I have made various enquiries regarding old inscriptions in this

part of the country, but the only two which I have heard of besides the Pehewa inscription, are at Pinjore and Kalka. Of these I have obtained copies, but there is nothing of peculiar interest, I believe, in them. The Pinjore inscription is apparently of Sumbat 592, and is cut on a stone in the Dhara Khshetra Tirth.

"I am preparing an account of several old towns in the Umballa and Thaneswar districts.

"The invasion of this part of the country by the Rajpoot tribes, some 1,000 years ago is most interesting, but the information I can obtain on the subject is rather vague, the conquest of the C. S. states by the Sikhs having brought about with it the destruction of all old records."

The Curator of the Zoological Museum and the Librarian submitted reports of additions made to their departments during the last month.

Read and confirmed, April 6th, 1853.

(Signed) J. W. Colvile.

Library.

The following additions have been made to the Library since the last meeting.

Presented.

Jahrbüeher der Literatur, Nos. 25, 80, 91—97, 98, 99 and 100.—By the Baron von Hammer-Purgstall.

Journal of the Royal Asiatic Society of Great Britain and Ireland. Vol. XIII. p. 2.—By the Society.

Second Report of the Commissioners for the great Exhibition of 1851, Royal 8vo. London 1852.—By A. Grote, Esq.

Tibet, Tartary and Mongolia; their social and political condition, and the Religion of Boodh, as there existing—by H. T. Prinsep, Esq. London, 1851, 12mo.—By A. Grote, Esq.

On the Relation of the Mind to external objects, Part II. by Bábu Akshaya Kumára Datta, 1852, 8vo.—By the Author.

A Grammar of the Marathi Language for the use of Students, by Dadoba Pandurang, 2nd Edition, Revised and Enlarged, Bombay 1850, 8vo.—By the Author.

Selections from the Records of the Bengal Government, No. X. Report

on the Establishment of Water-works to supply the City of Calcutta. By F. W. Simms, Esq., Two copies.—By the Government of Bengal.

Selections from Public correspondence published by authority N. W. P. Nos. IV. to XII.—By the Government of the North Western Provinces.

Statistical Report on Goorgaon, by A. Fraser, Esq. Agra, 1849, 12mo.—By the same.

Official Reports on the Province of Kumaon and Gurhwal, by J. H. Batten, Esq. Agra, 1851, 8vo.—By the same.

Memoirs on the Statistics of Indigenous Education within the North Western Provinces of the Bengal Presidency. By R. Thornton, Esq. Calcutta, 1850, 8vo.—By the same.

Memoir on the Statistics of the North Western Provinces of the Bengal Presidency, by A. Shakespear, Esq. Calcutta, 1848, 8vo.—By the same.

Statistical Report of the District of Cawnpore. By R. Montgomery, Esq. Calcutta, 1849, 4to.—By the same.

Statistical Report of the District of Futtehpore, by C. W. Kinlock, Esq. Calcutta, 1852, 4to.—By the same.

Chronische Alkoholskrankheit oder Alcoholismus Chronicus. Von Dr. Magnus Huss. Translated from the Swedish by Gerhard von dem Busch. —By the Translator.

Ueber die Bright'sche Nierenkrankheit. Eine akademische Abhandlung von Peter H. Malmsten. Aus dem Schwedischen übersetzt und mit einigen Anmerkungen versehen von dem Busch, Bremen, 1846, 8vo.—By the same.

Ueber die Schwämmchen die kindern. Aus dem Schewdischen übersetzt von Dr. Gerhard von dem Busch, Breman, 1848.—By the same.

Papers and Proceedings of the Royal Society of Van Diemen's Land. Vol. II. p. I.—By the Society.

Results of a series of experiments for determining the relative value of specimens of native gold from the different countries whence it is brought to market in these colonies. By his Excellency, Sir W. T. Denison, Tasmania, 1852, 12mo. pamphlet.—By the same.

Journal Asiatique No. 9. By the Societé Asiatique.

Notices of the Meetings of the Royal Institution, Part II. July 1851 to July 1852.—By the Institution.

Zeitschrift der Deutschen Morgenländischen Gesellschaft, vol. VI. p. IV.—By the Society.

Journal of the Indian Archipelago and Eastern Asia, for October 1852. —By the Editor.

The Oriental Christian Spectator, for January 1853.—By the same.

Report of the Calcutta Public Library, for 1852.—By the Curators of the Library.

Report of the Kew Committee of the British Association for the advancement of Science, for 1851-52.—By Col. W. H. Sykes.

On the census of the Islands of Bombay and Colaba, by Col. Sykes. —By the Author.

Tattwabodhiní Patriká, No. 115.—By the Tattwabodhini' Sabha'.

Vedánta Darsana and Adhikarana Málá, Nos. 1 to 4.—By Pandita A'nandachandra Veda'ntavagi's.

Bibidhártha Sangraha No. 14.—By the Editor.

Indian Atlas, Nos. 26, 40, 41.—By the Government of India.

Exchanged.

The Athenæum, for November 1852.

The London, Edinburgh and Dublin Philosophical Magazine, Nos 27-8.

Purchased.

Comptes Rendus, No. 19.

Annals and Magazines of Natural History, No. 60.

Haji Khalf Lexicon. Vol. VI.

March 2nd, 1853. Ra'jendrala'l Mittra.

Meteorological Register kept at the Office of the Secretary to Government N. W. P. Agra, for the Month of July, 1852.

Maximum pressure observed at 9-50 A. M.

Date.	Barometer.	Temperature.			Maximum and Minimum.			Aspect of the sky.
		Of Mercury.	Of Air.	Wet Bulb.	Maximum.	Minimum.	Mean.	
12	28.943	89.6	89.5	85.2	..	..	..	Hazy over head.
13	29.002	87.0	89.0	79.4	..	..	..	Ditto ditto.
14	29.049	87.8	86.75	80.0	..	..	..	⌇ all over heavens.
15	28.990	87.5	89.5	81.0	..	..	..	⌒ clouds.
16	29.026	88.25	98 5	80.3	..	..	..	\ along horizon.
17	28.911	89.5	91.0	82.8	..	..	..	Hazy.
18	28.920	88.5	91.0	81.0	..	..	..	Hazy.
19	29.052	90.0	91.6	81.6	..	..	..	⌒ all over heavens.
20	29.067	89.0	91.0	83.0	..	..	..	⌇ ½ heavens.
21	29.104	89.0	89.5	80.3	..	..	..	⌒ all over heavens.
22	29.074	89.0	91.4	80.3	..	..	..	⌒ all over heavens. ⌇ along horizon.
23	29.125	86.3	89.6	82 75	..	..	..	⌒ over head.
24	29.194	85.5	84.5	80.1	..	..	..	⌇ all over heavens.
26	29.051	89.0	89.0	82.9	..	..	..	⌒ ⅔ of heavens.
27	28.949	89.8	91.4	84.0	..	..	..	⌒ along horizon.
28	29.010	88.5	88.2	82.8	..	..	..	⌇ all over heavens.
29	29.040	87.6	86.0	81.5	..	..	..	⌇ all over heavens. ⌇ to N.
30	29.073	88.0	88.0	81.5	..	..	..	⌒ to S. ⌒ in horizon.
31	29.084	89.0	90.0	82.0	..	..	..	⌇ over head.
	29.034	88.36	89 76	81.71				

Note. The symbols used for Aspect of the sky are

\ for Cirri. — for strata.
⌒ for Cumuli. ⌇ for Cirro-strata.
⌇ for Cumulo-strata. ⌒ for Nimbi.

The Barometer readings have all been reduced to 32° Far. and corrected for Capillary Action.

W. Muir, *Secy. to Govt. N. W. P.*

Meteorological Register kept at the Office of the Secretary to Government N. W. P. Agra, for the Month of July, 1852. LATITUDE.

Observations at apparent Noon.

Date.	Barometer.	Temperature.			Maximum and Minimum.			Aspect of the sky.
		Of Mercury.	Of Air.	Wet Bulb.	Maximum.	Minimum.	Mean.	
12	28.932	86.0	91.2	83.75	..	..	..	Hazy over head.
13	28.984	88.25	90.5	80.0	..	..	..	Ditto ditto.
14	29.036	86.0	85.75	80.0	..	..	..	∿ all over heavens.
15	28.969	89.5	92.0	81.5	..	..	..	∩ clouds.
16	29.018	90.0	92.25	83.5	..	..	..	∩ $\frac{2}{3}$ of heavens.
17	28.991	88.0	92.0	84.0	..	..	..	Hazy. Horizon hazy
18	29.008	89.5	91.2	81.0	..	..	..	∩ over head.
19	29.027	88.0	93.4	83.25	..	..	..	∩ all over heavens. \ in zenith.
20	29.052	90.6	92.4	83.0	..	..	..	∿ in horizon. ∟ to north.
21	29.082	88.0	91.75	81.5	..	..	..	∩ to south.
22	29.051	88.0	92.4	80.5	..	..	..	∩ all over heavens. SE. and W. ∿.
23	29.101	88.5	91.0	81.5	..	..	..	N. ∩. ∿ to N.
24	29.146	85.5	86.0	80.5	..	..	..	∩ to SE. and W. ∩ along horizon.
26	29.015	88.0	91.4	81.2	..	..	..	Clear in zenith.
27	28.923	89.8	92.0	83.0	..	..	..	$\frac{3}{4}$ of heavens. ∩ along horizon,
28	28.975	87.8	89.2	82.5	..	..	..	clear zenith. \ in zenith.
29	29.014	87.5	88.0	82.0	..	..	..	∩ along horizon. ∿ to S.
30	29.042	88.25	90.2	82.0	..	..	..	∩ along horizon. ∩ in horizon.
31	29.057	88.8	91.5	82.5	..	..	..	∿ to N. E.
	29.022	88.21	90.74	81.96				

Meteorological Register kept at the Office of the Secretary to Government N. W. P. Agra, for the Month of July, 1852. LONGITUDE.

Minimum pressure observed at 4 P. M.

Date.	Barometer.	Temperature.			Maximum and Minimum.			Aspect of the sky.	Rain Gauges.		
		Of Mercury.	Of Air.	Wet Bulb.	Maximum.	Minimum.	Mean.				
12	28.877	85.5	92.4	83.0	92.5	85.0	88.75	Hazy over head.			
13	28.929	89.0	90.8	79.3	94.3	84.0	89.15	Ditto ditto.			
14	28.967	86.5	89.9	79.8	90.0	84.0	87.0	∿ all over heavens.			
15	28.909	91.25	92.8	82.0	96.4	83.25	89.825	∩ clouds.			
16	28.934	91.5	92.5	81.25	97.25	84.4	90.825	∩ $\frac{2}{3}$ of heavens.			
17	28.919	87.25	93.25	83.5	94.0	84.8	89.4	∩ $\frac{3}{4}$ of heavens.			
18	28.933	92.0	92.4	81.2	93.5	85.0	89.25	\ all over heavens.			
19	28.967	88.0	93.0	81.4	93.5	85.5	89.5	∿ all over heavens.			
20	28.950	90.8	92.5	84.5	93.5	85.0	89.25	∩ all over heavens.			
21	29.014	87.5	93.0	83 0	93.5	84.9	89.2	∩ all over heavens.			
22	28.994	90.5	93.0	80.9	93.5	86.8	90.15	∿ all over heavens.			
23	28.983	91.0	92.5	81.5	92.5	84 2	88.35	∪ N. ∩ S.			
24	29.044	87.5	89.2	81.4	89.5	79.2	84.4	∩ $\frac{3}{4}$ of heavens. ∩ along horizon.			
26	28.910	88.4	92.4	80.0	91.5	82.8	87.15	∪ in zenith.			
27	28.908	86.8	86.6	80.8	91.0	83.9	87.45	∿ all over raining.			
28	28.911	88.0	88.0	81.25	89.5	82.2	85.85	∩ $\frac{1}{2}$ of heavens.			
29	28.937	87.8	86.0	80.9	88.5	81.9	85.2	∿ all over heavens.			
30	28.959	89.0	91.4	82.0	90.0	81.8	85.9	∩ along horizon.			
31	28.939	89.0	92.7	81.25	91 9	82.9	87.4	∩ $\frac{3}{4}$ of heavens.			
	28.947	88.80	91.28	81.52	92.44	83.77	88.10				

Meteorological Register kept at the Office of the Secretary to Government N. W. P. Agra, for the Month of August, 1852.

Maximum pressure observed at 9.50 A. M.

Date.	Barometer.	Temperature.			Maximum and Minimum.			Aspect of the sky.
		Of Mercury.	Of Air.	Wet Bulb.	Maximum.	Minimum.	Mean.	
1	..	..	..	..	..	..	..	..
								∩ in hor.
2	29.012	88.5	87.75	81.5	..	..	..	∿ in zenith.
3	28.998	87.5	87.0	82.3	..	..	..	⌣ $\frac{1}{3}$ of heavens.
4	29.070	88.0	89.5	84.5	..	..	..	∩ to E. ⌣ to W.
5	29.029	88.2	89.5	84.0	..	..	..	∿ to N. and E.
6	29.020	86.0	81.25	78.0	..	..	..	∿ all over sky.
								∿ to N. E.
7	29.028	87.0	86.5	82.5	..	..	..	∩ S. W. to N.
8S.	..	..	..	..	..	..	..	..
9	29.011	82.0	86.0	81.0	..	..	..	∿ all along horizon.
								∿ to N.
10	28.976	86.0	85.0	81.5	..	..	..	∩ in hor.
11	28.943	85.2	84.0	79.0	..	..	..	∿ all over sky.
12	28.958	85.5	84.5	79.5	..	..	..	∿ all over $\frac{3}{4}$ of sky.
13	29.003	85.0	83 5	79.9	..	..	..	∿ all over sky.
14	29.036	86.0	86.5	80.0	..	..	..	∩ $\frac{3}{4}$ of heavens.
15S.	..	..	..	..	..	..	..	..
16	28.988	85.5	83.5	81.5	..	..	..	∿ all over sky.
17	29.070	84.0	83.5	80 0	..	..	..	∿ all over sky.
18	29.097	85.5	85.5	82.5	..	..	..	∿ all over sky, raining.
19	29.062	84.0	83.5	81.0	..	..	..	∿ all over.
20	29.104	84.2	83.3	81 0	..	..	..	∿ $\frac{3}{4}$ of sky.
21	29.089	84.8	84.0	81.0	..	..	..	∿ $\frac{4}{5}$ of sky.
22S.	..	..	..	..	..	..	..	..
23	29.145	86.0	86.5	82.0	..	..	..	∩ all along horizon.
								∩ with a few.
24	29.104	86 5	87 0	82.7	..	..	..	∿ all over.
25	29.173	86 8	86.0	83.0	..	..	..	∿ $\frac{3}{4}$ of sky.
								∿ in zenith.
26	29.207	87.2	87.0	85.0	..	..	..	∩ in horizon.
27	29.172	86 0	87.0	83.5	..	..	..	∿ all over sky.
28	29.167	84.0	84.8	79.5	..	..	..	⌣ along hor.
29S.	..	..	..	..	..	..	..	..
30	29 170	85.0	85.0	80.5	..	..	..	∿ all over sky.
31	29.174	85.1	86.2	81.1	..	..	..	∩ in horizon.
Means.	29.069	85.75	85.53	81.46	..	..	..	

Meteorological Register kept at the Office of the Secretary to Government N. W. P. Agra, for the Month of August, 1852. LATITUDE.

Observations at apparent Noon.

Date.	Barometer.	Temperature.			Maximum and Minimum.			Aspect of the sky.
		Of Mercury.	Of Air.	Wet Bulb.	Maximum.	Minimum.	Mean.	
1	..	..	..	..	..	..	..	..
								∩ in hor.
2	28.953	87.4	90.5	81.5	..	..	..	∿ to N.
3	29.001	88.0	89.25	83 0	..	..	..	∩ $\frac{2}{3}$ of heavens.
4	29.038	87.5	89.6	84.4	..	..	..	∩ all along horizon.
5	29.001	88.0	88.1	82.5	..	..	..	∿ all over heavens.
6	28.993	86.5	84.0	80.3	..	..	..	∿ all over sky.
								∿ in zenith.
7	28.995	87.7	89.0	83.0	..	..	..	∩ in hor.
8S.	..	..	..	..	..	..	..	..
9	28.956	87.0	86.7	82 3	..	..	..	∿ all over sky.
								∿ to N.
10	28.970	87.0	86.7	82.2	..	..	..	∩ to S. W. and E.
11	28 920	86.0	86.5	81.0	..	..	..	∿ all over sky.
12	28 950	85.5	86.5	80.7	..	.	..	∿ all over sky. [zenith.
13	28 974	86.0	86.2	80.5	..	..	..	∿ all over sky, hazy in
14	29.036	86.0	90.0	82.1	..	..	..	∩ in hor.
15S.	..	..	..	..	..	..	..	..
16	28.991	85.0	84.0	81.0	..	..	..	∿ all over sky.
17	29 058	85.0	84.5	81.0	..	..	..	∿ all over sky.
18	29.078	85.0	86.5	83.5	..	..	..	∿ all over sky, drizzly.
19	29.041	84.0	84.5	82.0	..	..	..	∿ all over.
20	29.070	85.1	85.5	82.0	..	..	..	∩ in horizon, all round.
								∩ in horizon.
21	29.062	85.0	85.1	81.6	..	..	..	∿ in zenith.
22S.	..	..	..	..	..	..	..	..
								∿ in zenith.
23	29.129	86.1	87.5	82.5	..	..	..	∩ along horizon.
								∿ to N. and E.
24	29.211	87.0	88.7	83.1	..	..	..	∩ to W. and S.
25	29.150	87.0	88.5	84.0	..	..	..	∩ to S. ∿ to N.
26	29.165	87.0	87.8	84 5	..	..	..	∩ $\frac{2}{3}$ of sky, with a few ∿.
27	29.141	86.7	87.5	83.4	..	..	..	∿ all over sky.
28	29.149	84.0	86.5	80.5	..	..	..	∩ $\frac{2}{3}$ of sky.
29S.	..	..	..	..	..	..	..	..
30	29.146	84.8	85.7	81.0	..	..	..	∿ all over sky.
31	29.125	86.0	87.0	81.8	..	..	..	∩ $\frac{1}{2}$ of sky.
Means.	29.050	86.17	87.01	82.13	..	..	..	

Meteorological Register kept at the Office of the Secretary to Government N. W. P. Agra, for the Month of August, 1852. Longitude.

Minimum pressure observed at 4 P. M.

Date.	Barometer.	Temperature.			Maximum and Minimum.			Aspect of the sky.	Rain Gauges.		
		Of Mercury.	Of Air.	Wet Bulb.	Maximum.	Minimum.	Mean.			3 feet 3 inches from the ground	
1	..	..	..	..	..	..	..	..	..	..	..
2	28.880	87 5	88.0	83.25	91.5	88.0	89.75	⌒ all over heavens.	..	..	..
3	28.931	86.5	89.25	82.75	88.5	79.25	83.87	¾ of heavens.	..	..	..
4	28.947	88 0	91.0	83.6	90.0	81.0	85.5	⌒ to W. and N.W.	..	..	..
5	28.931	87.75	88.7	83.6	88.7	83.3	86 0	⌒ all over heavens.	..	..	..
6	28.912	87.6	86.0	81.6	85.5	79.4	82.45	⌒ all over sky.	..	..	..
7	28.898	87.2	91.0	82.8	89.7	81.0	85.35	∩ ¾ of heavens.	..	..	..
8	..	..	..	..	..	..	..	..	..	..	..
9	28.880	86.0	86.0	82.1	86.2	80.2	83.2	⌒ all over sky. Raining.	..	..	..
10	28.870	87.5	87.7	83.2	88.2	79.0	83.6	⌒ all over.	..	..	..
11	28.848	85.5	86.6	81.0	86.2	79.0	82.6	⌒ all over sky.	..	..	..
12	28.886	86.0	86.0	82.0	86.5	78.8	82.65	⌒ all over head.	..	..	..
13	28.925	86 5	86.0	80.7	85.5	79.5	82.5	⌒ all over sky to N. ⌒ to.	..	..	..
14	29.014	87.0	89.5	82.5	90.0	80.2	85.1	W. S. and E. ∩.	..	1.23	..
15	..	..	..	..	..	..	..	..	..	..	..
16	28.980	84.5	84.2	81.1	84.2	80.0	82.1	⌒ all over sky.	..	..	..
17	28.988	85.5	86.0	81.5	84.8	78.8	81.8	⌒ all over sky.	..	..	..
18	29.006	85.7	87.0	83.7	86.0	81.9	83.95	⌒ all over sky.	..	..	..
19	28.970	86.0	85.4	83.4	89.5	81.0	85.25	⌒ all over sky. Raining.	..	0.27	..
20	29.024	84.5	81.4	80.0	85.0	79.0	82.0	⌒ all over. ∼ to W. N. and	..	0.26	..
21	28.990	86.1	88.0	81.5	86.5	79.9	83.2	E. ∩ to S.	..	0.12	..
22	..	..	..	..	..	..	..	..	..	..	..
23	29.044	87.0	89.0	81.7	89.2	81.0	85 1	∩ ¾ of sky.	..	..	..
24	29.003	87.6	89.0	83.0	88.5	80.7	84.6	⌒ all over sky.	..	..	..
25	29.078	88.0	90.4	84.2	89.0	83.1	86.05	⌒ all over sky. ⌒ in horizon.	..	..	..
26	29.102	87.5	87.0	84.0	84.8	82.5	83.65	Zenith hazy. ∩ in horizon.	..	0.12	..
27	29.058	89.0	89.0	84.0	88.0	83.2	85 6	Hazy in zenith.	..	..	..
28	29.097	84 8	86.5	80.0	86.6	79 0	82.8	⌒ all over sky.	..	..	..
29	..	..	..	..	..	..	..	..	..	..	..
30	29.083	85.0	86.5	81.0	86.0	79 2	82.6	⌒ all over sky.	..	..	..
31	29.071	87.8	88.0	79.0	88.0	81.9	84.95	∼ in horizon.	..	..	..
	28.978	86.62	87.43	82.2	87.42	80.76	84.08		..	2.00	..

Meteorological Register kept at the Office of the Secretary to Government N. W. P. Agra, for the Month of September, 1852.

Maximum pressure observed at 9.50 A. M.

Date.	Barometer.	Temperature.			Maximum and Minimum.			Aspect of the sky.
		Of Mercury.	Of Air.	Wet Bulb.	Maximum.	Minimum.	Mean.	
1	29.178	85 5	85.4	79.0	..	..	..	⌒ all over sky.
2	29.154	86.5	87.5	80.0	..	..	..	∩ in horizon.
3	29.151	86.0	87.0	82.0	..	..	..	⌒ all over sky.
4	29.152	86.4	87.0	79.0	..	..	..	⌒ all over sky.
5	..	..	..	..	..	..	..	..
6	29.118	86.2	85.5	79.1	..	..	..	⌒ all over sky.
7	29.141	86.0	82.6	79.1	..	..	..	⌒ all over sky.
8	29.189	85.0	84.5	80.0	..	..	..	∩ $\frac{3}{4}$ of sky.
9	29.173	84.0	84.8	79.5	..	..	..	Few ∩ in horizon.
10	29.200	85.0	85.8	80.0	..	..	..	Few ∩ to S. E. and W.
11	29.214	85.0	85.5	80.2	..	..	..	∩ E. ⌒ W.
12	..	..	..	..	..	..	..	..
13	29.207	87.0	87.3	81.2	..	..	..	∩ in horizon.
14	29.177	87.2	88.4	81.0	..	..	..	∩ in horizon.
15	29.182	87.8	87.8	81.3	..	..	..	∩ in $\frac{1}{3}$ of sky to S.
16	29.170	88 3	89.0	80.7	..	..	..	∩ to N. and S. in horizon.
17	29.156	89.5	89.5	82.4	..	..	..	Few ∩ in horizon.
18	29.092	88.0	89.3	81.6	..	..	..	∩ to E. S. and N.
19	..	..	..	..	..	..	..	..
20	29.081	87 0	87.9	77.2	..	..	.	Few ⌒ to S.
21	29.181	87.5	88.5	79.6	..	..	..	Clear sky.
22	29 189	87.0	87.0	77.6	..	..	..	⌒ $\frac{3}{4}$ of sky.
23	29.200	86.5	87.0	76.0	..	..	..	⌒ a few to E.
24	29.232	86.5	87.2	76.4	..	..	..	⌒ $\frac{2}{3}$ of sky.
25	29.264	86.2	86.6	76.0	..	..	..	⌒ scattered over $\frac{1}{3}$ of sky.
26	..	..	..	..	..	..	..	..
27	29.250	85.0	85.8	73.0	..	..	..	Few ⌒ to S. E. and N.
28	29.182	83.0	83.7	72.6	..	..	..	⌒ all over sky.
29	29.184	86.0	85.7	77.0	..	..	..	⌒ in E.
30	29.268	85.0	85.6	78.0	..	..	..	⌒ to E. or few.
	29.180	86.3	86.6	78.8	..	.	..	

Note.—Barometer readings have all been reduced to 32° Fahr. and corrected for Capillarity.

W. Muir, *Secy. to Govt. N. W. P.*

Meteorological Register kept at the Office of the Secretary to Government N. W. P. Agra, for the Month of September, 1852. LATITUDE.

Observations at apparent Noon.

Date.	Barometer.	Temperature.			Maximum and Minimum.			Aspect of the sky.
		Of Mercury.	Of Air.	Wet Bulb.	Maximum.	Minimum.	Mean.	
1	29.159	84.0	85.7	79.0	..	..	..	⌒ all over sky.
2	29.136	86.1	89.5	80.1	..	..	..	⌒ in E. and N.
3	29.124	87.0	87.0	82.0	..	..	..	⌒ all over sky.
4	29.122	86.5	89.4	79.5	..	..	.	⌒ $\frac{2}{3}$ of sky.
5	..	..	..	..	..	..	..	..
6	29.118	86.5	87.1	79 5	..	..	..	⌒ all over sky.
7	29 105	86.0	84.7	80.5	..	..	..	⌒ all over sky. ⌒ to E.
8	29.158	84.7	85.5	80.1	..	..	..	⌒ elsewhere.
9	29.153	84.0	86.0	80.2	..	..	..	Few ⌒ in horizon.
10	29.170	85.5	86.5	80 0	..	..	..	Drizzly.
11	29.188	84.5	87.0	80.5	..	..	..	⌒ all over sky.
12	..	..	..	..	..	..	..	..
13	29.167	87.0	89.4	81.5	..	..	..	⌒ $\frac{1}{3}$ of sky. ⌒ in horizon.
14	29.128	89.0	91.0	84.0	..	..	..	Few ⌒ to W. ⌒ in N.
15	29.148	88.0	90.0	81 5	..	..	..	⌒ to E. W. S. ⌒ to E.
16	29.123	88.0	91.1	80.7	..	..	..	⌒ to N. S. and W.
17	29.103	90.0	92.1	81.0	..	..	..	⌒ $\frac{2}{3}$ of sky. ⌒ to N. S. and W.
18	29.050	87.8	89.0	82.3	..	..	..	⌒ to E.
19	..	..	..	..	..	..	..	..
20	29.058	86.4	89.6	78.0	..	..	.	⌒ to N. a few.
21	29.150	89.0	90 9	80.5	..	..	..	Clear sky. ⌒ to N. and W.
22	29.151	86.7	89.0	80.0	..	..	..	⌒ to S. ⌒ in zenith.
23	29.154	88.0	89 0	75.5	..	..	..	⌒ in horizon. ⌒ in horizon.
24	29.203	87.5	88.8	76.6	..	..	..	Hazy in zenith.
25	29.237	84.1	89.0	74.0	..	..	..	⌒ in horizon.
26	..	..	..	..	..	..	..	..
27	29.213	84.0	90.5	72.5	..	..	..	Clear sky.
28	29.163	85.5	87.4	74.5	..	..	..	⌒ all over sky.
29	29.162	85.1	88.0	77.5	..	..	..	⌒ $\frac{2}{3}$ of sky.
30	29.246	82.5	86 7	75.5	..	..	..	Clear sky.
	29.149	86.3	88.5	79.1	..	..	..	

Meteorological Register kept at the Office of the Secretary to Government N. W. P. Agra, for the Month of Sept., 1852. LONGITUDE.

Minimum pressure observed at 4 P. M.

Date.	Barometer.	Temperature.			Maximum and Minimum.			Aspect of the sky.	Rain Ganges.		
		Of Mercury.	Of Air.	Wet Bulb.	Maximum.	Minimum.	Mean.		3 feet 2 inches from the ground.		
1	29.081	86.0	87.7	80.0	87.0	81.8	84.4	Clear sky.	..	..	..
2	29.047	87.5	91.5	81.0	90.5	82.0	86.25	Clear sky.	..	..	..
3	29.043	89.0	90.4	81.0	90.0	82.1	86.05	∿ all over sky.	..	..	..
4	28.998	87.3	91.1	79.8	90.5	81.7	86.1	∿ in horizon.	..	..	..
5	..	..	..	..	..	..	..	.. ∿ scudding.	0.64	..	..
6	29.019	86.9	88.9	79.2	88.2	80.9	84.55	From E. to W.	..	..	..
7	29.053	87.0	84.9	80.5	84.6	79.0	81.8	∿ all over sky.	0.73	..	..
8	29.094	85.0	86.0	80.0	85.2	79.0	82.1	∿ in horizon.	..	..	..
9	29.077	86.0	86.8	80.0	86.1	79.5	82.8	Few ∩ in horizon.	..	..	..
10	29.076	86.5	87.2	80.6	86.3	80.1	83.2	Few ∩ in horizon.	..	..	..
11	29.096	85.5	87.8	80.4	86.3	79.2	82.75	∿ all over sky.	..	..	..
12	..	..	..	..	..	..	..	..	..	..	..
13	29.061	88.6	90.5	81.7	90.2	80.0	85.1	∩ in horizon.	..	..	..
14	29.046	90.0	91.4	81.0	91.0	83.0	87.0	∩ in horizon. ∩ to E. N. and S.	..	..	..
15	29.090	87.9	91.0	80.7	90.3	81.9	86.1	∿ to W.	..	..	..
16	29.044	88.6	91.5	80.6	91.5	82.5	87.0	∩ in horizon.	..	..	..
17	29.034	89.0	88.1	81.6	91.5	83.0	87.25	∿ all over sky.	..	..	..
18	28.997	87.5	84.9	77.9	89.2	81.0	85.1	∿ all over sky.	.	..	..
19	..	..	..	..	..	..	..	..	..	..	..
20	29.010	88.0	90.8	78.5	90.0	79.4	84.7	Clear sky.	..	..	..
21	29.065	90.0	90.0	80.0	90.4	81.0	85.7	∿ all over sky.	..	..	..
22	29.053	88.0	91.0	85.0	90.3	81.1	85.7	∩ in horizon.	..	..	..
23	29.059	86.8	91.0	77.0	90.0	81.0	85.5	∿ all over sky. ∩ in horizon.	..	..	..
24	29.123	90.1	90.2	76.8	89.5	80.6	85.05	To S. and W.	..	..	..
25	29.175	84.0	90.0	73.4	89.5	80.5	85.0	∿ $\frac{1}{3}$ of sky.	..	..	..
26	..	..	..	..	..	..	..	..	..	..	..
27	29.125	84.0	91.0	72.5	90.7	79.7	85.2	Clear sky.	..	..	..
28	29.091	18.5	90.1	71.0	89.5	75.2	82.35	\ all over sky.	..	..	..
29	29.133	85.2	88.5	78.5	89.0	76.5	82.75	∿ in zenith.	..	..	..
30	29.194	83.3	88.3	70.0	87.0	76.0	81.5	Clear sky.	..	..	..
	29.072	87.2	89.3	78.8	89.01	80.30	84.65		1.37	..	..

Meteorological Register kept at the Office of the Secretary to Government N. W. P. Agra, for the Month of Oct., 1852. LONGITUDE.

Minimum pressure observed at 4 P. M.

Date.	Barometer.	Temperature.			Maximum and Minimum.			Aspect of the sky.	Rain Gauges.	
		Of Mercury.	Of Air.	Wet Bulb.	Maximum.	Minimum.	Mean.			Direction of the Wind.
1	29.188	88.0	88.5	69.6	88.5	73.9	81.2	Clear sky.		
2	29.200	82.1	86.6	71.6	86.0	72.2	79.1	Ditto.		
3	..	..	..	..	..	..	..	..		..
4	29.304	86.1	87.5	71.5	86.4	71.3	78.85	∩ $\frac{2}{3}$ of sky.		
5	29.346	89.1	89.0	70.5	89.0	76.0	82.5	Clear sky.		
6	29.330	86.0	90.4	69.5	89.5	75.0	82.25	Ditto.		W.
7	29.270	85.0	89.5	67.5	89.2	72.4	80.8	Ditto.		E.
8	29.284	86.0	89.0	71.1	88.2	70.5	79.35	∩ $\frac{1}{3}$ of sky.		S.
9	29.308	85.5	89.0	70.5	87.5	73.5	80.5	Clear sky.		N.
10	..	..	..	..	..	..	..	..		..
11	29.272	86.2	89.7	74.5	89.3	73.0	81.15	∩ a few scattered.		E.
12	29.216	86.5	88.5	73.7	87.9	73.5	80.7	Ditto.		Ld.
13	29.237	87.0	87.4	67.5	88.0	74.0	81.0	\ all over.		N.
14	29.226	86.0	87.0	66.5	87.1	71.7	79.4	Clear sky.		W.
15	29.227	87.0	87.5	65.6	86 0	70.9	78.45	Ditto.		W.
16	29.214	85.7	89.0	68.2	88.5	72.8	80.65	Ditto.		W.
17	29.256	84.9	85.6	69.0	85.5	71.0	78.25	Ditto.		W.
18	29.299	84.2	87.5	65.0	87.0	70.4	78.7	Ditto.		N.W.
19	29.296	85.0	86.1	65.5	86.0	69.1	77.55	Ditto.		N.W.
20	29.295	84.3	87.0	67.7	86.0	68.2	77.1	Ditto.		W.
21	29.310	85.0	89.0	67.6	89.8	69.2	79.5	Ditto.		E.
22	29.344	85.0	88.6	67.6	88.0	71.2	79.6	Ditto.		S.
23	29.345	84.1	86.7	68.0	85.4	70 9	78.15	Ditto.		E.
24	29.274	84 9	82.0	68.9	85.0	69.9	77.45	Few ∩ to S. E.		S. E.
25	29.336	85.0	86.3	71.0	86.9	75.5	81.2	Clearsky.		E.
26	29.305	84.3	85.1	67.1	84.8	73.8	79.3	Ditto.		W.
27	29.262	85.0	85.4	65.0	85.0	67.9	76.45	Ditto.		W.
28	29.363	83.5	85.6	67.9	85.2	69.6	77.4	Ditto.		W.
29	29.412	82.5	83.0	65 7	82.5	68.5	75.5	Ditto.		E.
30	29.394	82.2	83.0	64.3	83.5	66.9	75.2	Ditto.		W.
31	29.398	81.5	80.0	63.1	80.0	65.0	72.5	Ditto.		Ld.
	29.293	85 1	86.5	68.4	86.6	71.3	78.95			